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# MERGENCY POWER BILL

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## HEARINGS

BEFORE THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE  
OF THE HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

SECOND SESSION

ON

H. R. 12776

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AUGUST 23 TO 27, 1918



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1918

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE.

HOUSE OF REPRESENTATIVES.

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D. of D.  
MAY 22 1919

## EMERGENCY POWER BILL.

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COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
HOUSE OF REPRESENTATIVES,  
*Friday, August 23, 1918.*

The committee met at 10 o'clock a. m., Hon. Thetus W. Sims (chairman) presiding.

### STATEMENT OF HON. NEWTON D. BAKER, SECRETARY OF WAR.

The CHAIRMAN. Mr. Secretary, you have had your attention called, I suppose, to House bill 12776, the emergency power bill.

Secretary BAKER. Yes.

The CHAIRMAN. Mr. Secretary, what I would like very much for you to do now, in your own way and in your own time, is to explain to the committee the necessity for such legislation at this time and the necessity for expeditious action.

Secretary BAKER. I shall have to ask the committee, Mr. Chairman, to rely upon others for the technical details and the surveys which have been made of the situation.

Some six or eight months ago it became apparent that there would be a power famine, or at least a very great power shortage, in the country unless something could be done to stimulate the installation of additional generator capacity. The matter affected the War Department, the Navy Department, and the Emergency Fleet Corporation, so that it was a thing upon which more than one department concentrated its attention, and it was suggested, as I recall it, by the President, that the matter be referred to the War Industries Board as the proper agency to make a complete and comprehensive survey of the entire field. Mr. Darlington, an agent of the War Industries Board, undertook to make a survey of the existing power facilities, the estimated power needed, and the means of supplying the deficiency. In that work Mr. Darlington was assisted, so far as was possible, by the direct representatives of the War Department, the Navy Department, and the Emergency Fleet Corporation. Mr. Bulkley, who is here, was associated in the work extensively from the very beginning, and Mr. Bulkley cooperated with the War Department, and I had many interviews with him about it, but the direct representative of the War Department generally was Gen. Keller, of the Engineer Corps.

The net result of Mr. Darlington's studies, confirmed as I understand by studies made independently in the several departments, was to show a very large deficiency in power during the coming winter, and a very much larger deficiency in the next winter.

The need for immediate action in some method of meeting that difficulty grows out of the fact that the summer is already well spent,



and if construction is to be undertaken, and it must be undertaken in the matter of power houses and lines, it will be necessary to start immediately in order to get relief in time.

The three principal shortages center around the so-called Pittsburgh district, including a very wide reach of country around Pittsburgh which is devoted to manufacturing industries of one kind and another; Philadelphia, and a section of New Jersey. We attempted to meet the emergency by apportioning those three districts, allowing the War Department—out of the funds at its disposal, so far as it could—to supplement the power in the Pittsburgh district; the Navy Department in the New Jersey district; and the Emergency Fleet Corporation in the Philadelphia district.

It required a great deal of ingenuity to work out a plan by which the funds in the War Department could be made available for the establishment of supplementary power supplies. The Emergency Fleet Corporation had some elasticity in its funds; the Navy Department somewhat less elasticity. We have all been working at it fairly steadily for four or five months; and, so far as I know, the only progress made so far is that the War Department has made a contract in the Pittsburgh district with an existing power company by which we undertake to buy a very large lot of power, and by anticipation supply some of the money necessary for the enlargement of the existing facilities. This contract is more or less of a model contract. It has been worked out most carefully by men of very great intelligence and ingenuity, but it is only a drop in the bucket.

I have gone over the main outline of the proposition. If the committee will get from Mr. Darlington the surveys, you will find the existing power facilities in those three districts, and the conservatively estimated needs of the three war-making departments of the Government which are engaged in active construction operations, and the deficiency in power will appear plainly.

Now, the next question, of course, which interests all of us is whether it is necessary for the Government to step in and supplement these facilities with financial assistance, or whether the private companies could be required or relied upon to supplement their own facilities. I think I can say without prejudicing the market value of the securities of any electric-power company that the general situation with regard to power companies in this country is that they were financed up to their limit before the war began. There are very few forms of industry in which as intricate financing has been current as in the electrical industries, and when we came to ask the power companies to enlarge their facilities, we were met with an indisposition on their part to enlarge sufficiently to meet the war needs because they feared, that after the war was over the increased facilities would be greater than their then market demand, so that they would have a lot of surplus facilities on their hands which they could not profitably use. And, we found, in addition to that indisposition, an inability on their part to borrow the necessary money to make the needed expansions. That inability arose from the fact that many of these companies were already involved financially, and also from the fact that during this period of war prices, the war costs, the added force of the creation of these facilities in labor and material and machinery, is a substantial percentage above the cost in

normal times, and the attitude of these companies was that if they were called upon to increase their generating capacity by a very large addition, that the difference between the normal cost and the war cost ought to be borne by the Government in whose interest the additions were made; and that some way of having Government aid in their finances would have to be devised in order to carry it through at all.

We then took it up with the War Finance Corporation and found, under the limitations of its powers, that it was wholly unable to lend money to these power companies upon any terms upon which they could borrow it. There was no other recourse than the introduction of a general power bill, and that course was then followed and this bill prepared by the attorneys, as I understand it, for the War Industries Board.

I have examined the bill casually only. It seems very elastic in terms and commits to the President's discretion the determination of the particular mode of dealing with a utility in any particular place. Some such elasticity is necessary because of the different circumstances, both physical and financial, of the various companies throughout the country that will have to be dealt with in the enlargement of these facilities.

The CHAIRMAN. Mr. Secretary, I suppose it is the conclusion, as a result of all the investigations and studies that have been made, that unless the power shortage is relieved in some way the shipbuilding program and other war industries will be greatly retarded in their undertakings.

Secretary BAKER. There is no possible doubt of that. Judge Sims. The matter has been examined not only by Mr. Darlington but by Gen. Keller, by Mr. Ballard, an electrical expert from Cleveland, whose capacity I happen to know very well, by Mr. Cook, who was formerly the director of public works of the city of Philadelphia, and by a number of other very expert men. They have gone over the entire situation and their unanimous agreement is that it is very serious and that unless something is done it will slow up both the war and shipbuilding programs.

Mr. ESCH. Mr. Secretary, if I remember correctly, when the Army appropriation bill was pending in the Senate, an amendment was offered by Senator King, giving to private persons and corporations the right of condemnation for the enlargement and construction of electrical power plants; but that amendment was objected to and did not remain in the bill. Would that have been sufficient for your needs?

Secretary BAKER. I do not think so, sir. I do not recall Senator King's amendment, but as you describe it, it would not have been sufficient.

Mr. ESCH. It would not have been?

Secretary BAKER. No. It is not merely a question of condemnation, but it is a question of being able to borrow the money or to get the money to cover the difference between the value of the plant to the expanding company after its war use is over and the cost of it at the time of construction.

Mr. ESCH. This bill has some such provision as that, and where the cost is very large, at the end of the period the owners can take it over and the Government gives them some rather generous terms. Is

that done in order that these plants may be induced to enlarge their facilities?

Secretary BAKER. Either induced or required. The bill, as I understand it, is mandatory. It gives mandatory power as well as persuasive power.

Mr. ESCH. Yes; it does.

Secretary BAKER. The point, Mr. Esch, is this: Using figures which may or may not be accurate, but have been used as the basis of discussion, it is said by the power companies that the plant which to-day would cost \$100 to install could in normal times be installed for \$60, and the contention of the companies is that the Government ought to pay that difference of \$40 because the plants would not be expanded by its owners to meet the war needs unless the Government's interests required it to be done. Now, the theory upon which we have been attempting to meet that contention is that we ought not to jump at an estimate of the difference between peace-time value and war-time costs, but ought to make an arrangement by which the Government will aid in the financing, as far as may be necessary, and allow the exact amount of the Government's contribution to be determined, after the war is over and things have returned to normal, by an appraisement of the value of the plants to the company and let the Government then pay the difference between the appraised value and the cost during war times.

Mr. ESCH. Is it the primary purpose of the bill to put the power plant at the mine mouth and thus save the haulage of the raw material?

Secretary BAKER. Wherever that can be done it should be done. There are some places where it can not be done, as, for instance, in the Philadelphia district, where the transmission loss or the line loss in transmission of high-tension current from the mine mouth to the Philadelphia district would be so great as to be uneconomical.

Mr. ESCH. How would that be as to the mines of West Virginia with reference to the Philadelphia field?

Secretary BAKER. I think they would be too far away for economical transmission.

Mr. ESCH. It would not be more than 200 miles.

Secretary BAKER. That is a very long line for high-tension transmission.

Mr. ESCH. Is not that what we are doing at several places in the country?

Secretary BAKER. You are doing that with hydroelectric power. I am not an expert in electricity, but I have been told generally that 200 miles is regarded as the limit, if not beyond the limit, of economical transmission because of line loss.

Mr. ESCH. This bill contemplates the production of gas and coke and chemical elements necessary for war explosives?

Secretary BAKER. Yes.

Mr. ESCH. And you think this bill is necessary to stimulate that production, too?

Secretary BAKER. I should not say that, Mr. Esch, but I would say that wherever the Government is going into the production of additional sources of power, there ought to be the right in the Government to develop those incidental and by-product economies which will both save money in the operation and increase the Government's

supply of these very necessary things like coke and the by-products of coal reduction.

Mr. ESCH. I notice section 6 provides:

That no structure affecting the navigable capacity of any navigable waters of the United States shall be constructed or installed under the provisions of this act until the plans therefor have been approved by the Chief of Engineers and the Secretary of War.

May not that give rise to a possible clash between this bill and the pending water-power bill, in which, as you remember, the commission, of which you would be a member, has the right, if it deems it proper that the Government should construct a dam for power on navigable streams, to make surveys and constructions and recommend stations to Congress for its action? With that power granted in the pending water-power bill, would not that be sufficient for your needs without the insertion of section 6?

Secretary BAKER. It would be a mistake to pass this bill without the caution contained in section 6. This might be regarded as an omnibus power to construct power plants anywhere, and nobody ought to be given the power to construct water-power plants in navigable streams at variance from the general policy of the Government contained either in existing legislation or legislation pending if it should pass. This language might be amended to read "or such other body as may be authorized by Congress to pass on such subjects."

Mr. ESCH. It had occurred to me that we might amend it in that way.

Secretary BAKER. That might be done.

Mr. ESCH. Of course, in the water-power bill the power is given to the three Secretaries.

Secretary BAKER. Yes.

Mr. ESCH. And this is confined to your own department.

Secretary BAKER. This is dealing with existing legislation rather than legislation that is pending.

Mr. ESCH. We have great hopes that that legislation will pass.

Secretary BAKER. So have I.

Mr. ESCH. And if it is passed, its action can be quite as expeditious as action under section 6 of this bill.

Secretary BAKER. I do not believe it is intended under this bill to construct any hydroelectric power. That certainly is not any part of the present plan. There may be some enlargements of the existing plants, but that is not what we are after. We are hunting for very much more rapid power development than could be had by building dams on undammed rivers.

Mr. ESCH. Of course the expansion of steam plants would be much more rapid and much less expensive in the first instance.

Secretary BAKER. Yes; the installation cost is less.

Mr. STEPHENS. Mr. Secretary, I did not quite get your views in regard to the financing of these private corporations. Is it your view that under present conditions, even though the Government authorizes their capitalization, these private lighting companies would not be able to sell their bonds and finance themselves at all, on account of the risk that their power would not be salable after the war?

Secretary BAKER. That is part of it. Some of the companies are already capitalized to the limit. Some of them are in an association

with other electric-using enterprises, coupled up with street railroads and public utilities generally, so that their financial situations are complicated, and no one rule could be laid down which will apply to all of them. I found, for instance, in the Pittsburgh district, which was set aside for War Department aid, one of the largest power plants in America, and one of the most advantageously located, known as the Beach Bottom Plant at Wheeling, W. Va., located almost at the mouth of the mine. I think it is a chute proposition from the mine down to the coal bins of that plant. It is relatively new, not yet completely installed. Their financial situation is such that they are able to get along without any Government aid of any kind, and they are going ahead rapidly to complete their plant. In other plants in the Pittsburgh district we found the financial condition such that the companies apparently were wholly unable to borrow money to go forward with their expansions; and I have no theory of dealing with them except that the Government ought to extend as little aid as it consistently can to get the thing done and under as great safeguards as can be devised in order to make the Government's ultimate contribution, its loss because of war costs, as little as possible, and to get back for the Government when the war need is over as much as can be salvaged of its expenditures.

Mr. STEPHENS. I have not read the bill and do not know what it provides, but in a general way I take it that you contemplate in this measure giving aid to these corporations that are not able to finance themselves rather than to take them over as Government property?

Secretary BAKER. In some instances one, and in some the other.

Mr. STEPHENS. This gives you a wide latitude.

Secretary BAKER. Very wide, and it must be so, because of the different circumstances of the different plants.

Mr. PARKER of New Jersey. Mr. Secretary, you, of course, have studied the English system by which they take over any plant on Government account and allow the owner his prewar profits plus a certain percentage and run the rest on Government account?

Secretary BAKER. That is the "Government controlled plan" in England.

Mr. PARKER of New Jersey. That is not involved here, exactly?

Secretary BAKER. It might be necessary with regard to some plants to do exactly that.

Mr. PARKER of New Jersey. Is power granted in this bill to do that?

Secretary BAKER. Yes.

Mr. PARKER of New Jersey. In the English arrangement they did it with an arrangement of some kind with the labor unions so as to be allowed to use their labor or something of that sort.

Secretary BAKER. There is nothing in this bill that affects that at all.

Mr. PARKER of New Jersey. The other subject is so large that I suppose it had better be dismissed for the present until the Government takes charge of it.

Secretary BAKER. You mean the labor question?

Mr. PARKER of New Jersey. No; not the labor question, but this question of taking over and acquiring Government control of these manufacturing plants.

Secretary BAKER. That is in this bill, in this sense—

Mr. PARKER of New Jersey (interposing). So far as power is concerned?

Secretary BAKER. Power is given to do that.

Mr. PARKER of New Jersey. So far as power is concerned?

Secretary BAKER. Yes.

Mr. PARKER of New Jersey. But only as to power?

Secretary BAKER. Only as to power plants.

Mr. PARKER of New Jersey. It has not been thought necessary to extend it beyond power plants, and we have already the railroads and telegraphs.

Secretary BAKER. There is existing power, Judge Parker, to take over plants and operate them on Government account, and the War Department has taken over some and is operating them.

Mr. PARKER of New Jersey. That is something that is growing?

Secretary BAKER. Yes; we continually find new things to do.

Mr. MONTAGUE. Mr. Secretary, I understand you desire either to extend aid to plants or to take the plants over that are engaged wholly in operations incident to the war?

Secretary BAKER. It is not so narrow as that. In the Pittsburgh district, for instance, you will find power distributed over lines which supply private industry, public enterprises, and private industries engaged in public work, and you have an aggregate shortage of power. In many places what will be done will be to boost the aggregate of power in the district by simply increasing the amount of electricity fed into the supply lines.

Mr. MONTAGUE. But that will be an incident to increasing the war activities, will it not?

Secretary BAKER. Yes. That is its prime and its sole purpose.

Mr. MONTAGUE. The prime object is to increase the military output.

Secretary BAKER. That is its sole purpose.

Mr. MONTAGUE. If these other factors enter into it, they come in as necessary incidents?

Secretary BAKER. Yes; as an incident, and this act provides power to require the companies to place their entire output at the disposal of the Government, so that the Government may apportion the surplus power.

Mr. MONTAGUE. So the whole purpose of the bill is to increase the military supplies and the military efficiency of the country?

Secretary BAKER. Yes, sir.

Mr. MONTAGUE. When I say military I mean to embrace both the Army and the Navy.

Secretary BAKER. Yes; and the Emergency Fleet Corporation.

Mr. MONTAGUE. It is not related, then, to the subject of commerce between the States at all.

Secretary BAKER. That is a legal question which I had not thought of. I have not the least doubt that many of the supply lines cross State lines and go from one to another.

Mr. MONTAGUE. For military purposes, would that be?

Secretary BAKER. Undoubtedly.

Mr. MONTAGUE. Could you suggest an instance, Mr. Secretary?

Secretary BAKER. I can not suggest an instance beyond this, that a line in Wheeling, W. Va., carries current generated in Wheeling,

W. Va., for consumption in Pittsburgh for a war industry in Pittsburgh, and the same line is tapped in West Virginia for a war industry in West Virginia.

Mr. DEWALT. Mr. Secretary, are there any funds now available for the purposes contemplated by this act?

Secretary BAKER. Very modest amounts are available in the Emergency Fleet Corporation and the War Department, wholly insufficient amounts, and they are available only by the device of a rather round-about contract with companies for power supply.

Mr. DEWALT. Am I correct in stating that contracts have been made with a Pittsburgh corporation and that the money obtained for the payment of that corporation is from the War Department?

Secretary BAKER. One such contract has been made and others are in progress of formulation.

Mr. DEWALT. I think I saw in the Official Bulletin a notice of that kind.

Secretary BAKER. Yes, sir; one such contract only, so far as I know, has been made.

Mr. DEWALT. So that you would state affirmatively that there are no funds available from any emergency moneys that might be used for the purposes of this bill?

Secretary BAKER. No adequate funds. Very inadequate additions can be made, but they scarcely affect the general problem.

Mr. DEWALT. Is it also true that in some large business enterprises that are using and have been using electric power the supply of such power has been cut by the Federal authorities from 25 to 50 per cent by reason of this shortage?

Secretary BAKER. I have no doubt of it, sir, and perhaps much more than that in some instances.

Mr. DEWALT. I have specific reference now to cases in my mind. In the eastern district of Pennsylvania we have a very large electrical supply company, the power of which is generated by the use of coal, the Hauto Electric Supply Co., located near Hazleton, about which I presume the Secretary has information—

Secretary BAKER (interposing). Yes.

Mr. DEWALT (continuing). And I am told by those interested in the cement industry, which is partially at least considered essential for war purposes, that their supply for these plants has already been cut 25 per cent and that another order has been issued or is about to be issued by which the supply is to be cut again 25 per cent. I am told that this would substantially, if not entirely, compel these cement mills, one of which I have in mind now and which has a capacity of 30,000 barrels per day and another a capacity of at least 18,000 barrels per day and so on down the line to a minimum of 5,000 barrels per day, to close up their establishments. Have you any information upon the subject, Mr. Secretary?

Secretary BAKER. No; I do not know of those particular cases, but they are excellent illustrations of the situation, and even more exaggerated restrictions will be found to be necessary in the Niagara Falls district.

Mr. DEWALT. Now, this is said to be occasioned by the demands and the necessities of the Bethlehem Steel Co., which, as we all know, is almost exclusively devoted now to the manufacture of munitions of war and armor plate, and they have no adequate way of

providing their own power and getting their supply, or their partial supply at least, from this Hauto Electric Supply Co. As I understand the provisions of this bill the object is to remedy that shortage of power not only for the Bethlehem Steel, but for all other enterprises by giving this Government aid, is that correct?

Secretary BAKER. Yes; with this limitation, it is not intended, as I understand it, in the operation of this bill to attempt to increase the power supply so as to be able to take care, without limit, of all the customers, but to increase it adequately to take care of all whose continued operation is important to the prosecution of the war.

Mr. DEWALT. That is the general scope of my inquiry, but referring, if you please, Mr. Secretary, to one clause in this bill on page 7, subsection 9, I call your attention to this language:

In furtherance of any of the foregoing purposes, to modify, cancel, or suspend any existing or future contracts for the delivery of power to any person not engaged in the production of war material or to the extent to which he shall deem the power contracted for to be in excess of the requirements for the manufacture of war material by such persons or to which, in his opinion, it shall prevent the delivery of power which he shall deem necessary for the production of war material of greater or more immediate utility.

That is already being done by the executive authorities, is it not?

Secretary BAKER. It is being done by the War Department in one or two instances under the power given to us to commandeer supplies for war needs. It was found necessary to resort to that in the Niagara district. That is the only case that I recall.

Mr. DEWALT. The question arose in my mind as to whether this would not involve the Government in a great many entanglements as to suits and possible recoveries for damages. No doubt the lawyers who drew this bill had that in mind, but have you any views upon that subject.

Secretary BAKER. I have not; I would rather the lawyers be asked about that.

Mr. DEWALT. There is another provision, on page 12, section 8—and whilst I ask this question, Mr. Secretary, of course, I am not suggesting my own views in reference to the matter; I am only asking your own views and possibly those of your attorneys:

That the President may retain any property and operate any plants, transmission lines, structures, facilities, or appliances constructed or acquired under the provisions of this act for such time as he may deem necessary or advisable for the purpose of selling or otherwise disposing thereof.

Does not that look almost like permanent ownership of these various plants, and might it not be so construed, if the President so desired? There seems to be no limitation there at all as to the ownership of these various plants, except in so far as it says that he shall hold them as long as he may think it necessary.

Secretary BAKER. That would give the President power to retain permanently things of that sort, and I think it is highly important that he should have that power for two reasons: In the first place, any fixed period within which the things would have to be sold might require the Government to sustain a very great loss because of the inopportuneness of the time of sale, and the second reason is that some of these large power additions may very well be built near to a permanent Government establishment of a large kind. For in-



stance, the War Department is constructing at Neville Island, near Pittsburgh, a big gun plant which will cost from seventy to ninety million dollars. If there should be, among these plants, added a large power plant which was especially well adapted to be a continuing adjunct to a Government gun plant, the President ought to retain it as a permanent Government asset.

Mr. DEWALT. While recognizing the force of what you say in the individual instance that you have mentioned, I think you still recognize the fact that there is a rather well-grounded sentiment against public ownership of such utilities—that is, Federal ownership of such utilities—and I merely throw out that suggestion. Do you not think it would be wise in some way to amend that section so that this possibility, not probability, of unlimited Federal control and ownership of public utilities should in some way be hedged about?

Secretary BAKER. Personally, I do not share the prejudice against Government ownership of enterprises of this kind, so that my natural disposition would be to favor rather than to discourage the retention of these things by the Government in places where it was appropriate.

Mr. DEWALT. With all due respect to your opinion, nevertheless I judge there are others who have a different opinion, possibly a larger number having the same opinion that some others may have contrary to yours, and, therefore, would it not be well, in your judgment, to somewhat hedge that section about, and, if so, will you be kind enough to have your attorneys inform me because, perhaps, the other members are well informed on that subject.

Secretary BAKER. I would not be able to suggest the language which might be appropriate to carry out that idea. The lawyers will be here and will doubtless be able to do it. But I will say, generally, that I agree with you perfectly. This is not the place to settle the great policy of Federal ownership. What we want to do now is to get the power.

Mr. DEWALT. The immediate purpose is to get power and not get permanent ownership.

Secretary BAKER. Yes.

Mr. MONTAGUE. Do you think, irrespective of the merits of public ownership, that we should win the war before determining that question?

Secretary BAKER. Yes; I do not think we want to do anything that will interfere with that purpose.

Mr. MONTAGUE. Do you not think it ought to be determined upon economic and constitutional considerations under peace conditions, if necessity and sound expediency then exist?

Secretary BAKER. I should say that when we are doing things to make war that we ought to do the things having that sole object and purpose in view and not attempt to accomplish a collateral object.

Mr. MONTAGUE. Otherwise we are not making candid and honest legislation.

Secretary BAKER. Yes; I am in favor of the direct way of doing it, but in passing legislation of this sort we ought to leave the question wide open, so that the succeeding Congresses will be free to

determine the great peace policy when the time comes for them to turn their attention to it.

M ESCH. How did you arrive at the estimate of \$200,000,000?

Secretary BAKER. That was not my estimate.

Mr. ESCH. There must be some basis.

Secretary BAKER. The War Industries Board, Mr. Baruch, and his associates, arrived at that figure, and, doubtless, will be able to explain it.

Mr. ESCH. Will we have data presented to us giving the locations of existing power plants?

Secretary BAKER. They are available.

Mr. ESCH. And the amount of power developed?

Secretary BAKER. Yes; those figures are all available.

Mr. DOREMUS. I judge, Mr. Secretary, from what you said in answer to Gov. Montague's question that you do not think it advisable in this legislation to prejudice any future action of the Government on the question of the permanent retention of the plants?

Secretary BAKER. I think it ought to be left within the power of the Government to determine at a future time what its future policy will be.

Mr. ESCH. The Government or Congress.

Secretary BAKER. Well, I do not suppose it can ever be removed beyond the control of Congress.

Mr. MONTAGUE. So that whatever policy is adopted can be changed by another Congress.

Secretary BAKER. Undoubtedly.

Mr. MONTAGUE. It is impossible for this Congress to prejudice another Congress.

Secretary BAKER. Undoubtedly.

The CHAIRMAN. We are very much obliged to you, Mr. Secretary.

#### **STATEMENT OF MR. BERNARD M. BARUCH, CHAIRMAN WAR INDUSTRIES BOARD.**

The CHAIRMAN. Mr. Baruch, will you kindly explain to the committee the needs of the Government—and especially that portion which you are administering—for legislation along the lines of the present bill in your own way and without interruption until you have made your preliminary statement?

Mr. BARUCH. My attention was called to this matter sometime ago in a general survey of our war program, and what I mean by our war program is not that alone which involves the War Department, but the Navy, the Shipping Board, the Emergency Fleet Corporation, the Railroad Administration, and all of those functions which enter into the making up of our final war program.

From time to time sporadic instances were brought to my attention, or, rather, to the attention of the board, as to the lack of power. We proceeded to make quite a study of the situation, which has been rather nation-wide, although it has not been made in infinite detail. But a study of it soon convinced me that it was necessary to do something and do something immediately. We made a study of the situation and found that it was difficult for any one department to do

this, because the work in any one district—for instance, like Norfolk or Philadelphia—involved work for all of the departments, and it was difficult to tell exactly in what proportions each of the departments were involved, and it was also impossible to tell how much many of the subcontractors, who did not have direct contracts with the departments, were involved. The emergency was so great that I endeavored to get the departments to take this up as departments. We found particularly that the program would be very much retarded—especially as winter comes on—in what we call the New Jersey district, the Philadelphia district, the Baltimore district, the Norfolk district, the Pittsburgh district, and the Akron, Ohio, district. We tried to come to some adjustment between the departments and get something in that way, in the meantime having this bill framed as an emergency bill, and hoping to get it passed quickly.

In endeavoring to meet the situation we had the departments make a study to see whether they could possibly furnish the money, and in only one or two instances in the War Department did we find it possible to have the money supplied, but in the Pittsburgh district and in the New Jersey district we have not been able to solve that problem from the standpoint of the department.

Briefly I may state, for instance, that in the New Jersey district, which is already so congested that we do not permit any further manufacturing there because of the difficulties of transportation and labor, it was found necessary to put the Ford plant for the assembling of the Eagle boats on the Newark meadows, and that involved a certain amount of power. It was not possible to put it at any other place and get the speed of production that is necessary in connection with these boats. Every day lost by these boats upon the sea may be a very serious menace to the conveying of troops and the materials that go over to the other side for all of us, and day after day we are receiving complaints from there as to the shortage of power. Now, the board not only feels that it should help work out the war program, but that it should look after the necessary and vital civilian needs. By that I do not mean what might be termed the less essential needs, but the vital and necessary civilian needs—that is, the heating, lighting, and transportation necessary in order that the population may live in ordinary comfort. We have studied the various points from the standpoint of seeing how much we can save by reducing the less essentials, and we have found on examination that it was impossible to meet the war program even if we cut out the less essential uses of power entirely, and we have come to the conclusion that the only way that this can be done is to do it in this way.

In drawing the bill I asked the gentlemen who were doing it not in any way to have the bill drawn so that it would accelerate or retard public ownership, as that was a moot question, and, in fact, to draw it in such a way that only the emergency war matters should be met, and that any other great questions involved in it be left to be decided at another time and leave the statu quo where it is to-day.

This bill is drawn for the purpose of giving us the needed emergency power as quickly as can be done and with as little expense and with as little loss to the Government as is possible. It has been made wide in its power because it is rather difficult to lay down a rule

which would cover a large number of cases. Each individual case will have to be taken up by itself.

I can not impress upon you too strongly the grave necessity for immediate relief. How much will be afforded by action taken immediately I am not prepared to say now. The winter is coming along, and in this bill is not only contained relief for the present, but relief extending into the program of 1919 and 1920. As foresighted men we must commence to look forward, because it takes a long time to do these things, and it takes a long time to get the machinery. It is not proposed that anyone who will administer this bill will do things other than those absolutely necessary for the military program, and when I say the military program that involves all of the war activities.

I do not know of anything else I could say just at this moment, but I will be very glad to answer any questions.

Mr. ESCH. Mr. Baruch, I want to find out on what basis you determined that \$200,000,000 is necessary.

Mr. BARUCH. That was the result of a survey made by engineers connected with the board, some civilians and some Army officers, among them Gen. Keller, and a number of other officers we have been able to get from the War Department. I might say also that these necessities have been checked up by the other departments, and we have seen no reason to change our views, but the necessities have grown larger rather than lessened.

Mr. ESCH. You have the data on which to base the estimate, and will it be possible for you to incorporate those data in your hearing?

Mr. BARUCH. I will be very glad to do it; I have not them in mind, but I will have them presented.

Mr. ESCH. You will incorporate them in your hearing?

Mr. BARUCH. Yes, sir.

Mr. ESCH. I think it will be very necessary to have them, and also the details on which you base the request for \$150,000 for administrative expenses. I will ask for those details also.

Mr. BARUCH. All right, sir.

Mr. ESCH. Will the data you furnish give us the location of existing plants?

STATEMENT OF MONEY REQUIRED TO SUPPLY POWER FOR WORK ESSENTIAL TO THE WAR.

WASHINGTON, August 30, 1918.

The power section of the War Industries Board have made detailed estimates of the additional power that must be provided to adequately supply existing work essential to the war, and have estimated the cost of the construction necessary to supply the power. The aggregate cost of the additional generating plants and transmission and distribution systems to supply power to meet the essential demands prior to the winter of 1919-20 is estimated as \$138,427,000. This is based upon the present war production in Army, Navy, and emergency fleet undertakings, and the larger part of this power is urgently required for operation prior to the winter of 1918-19. The figures in nearly every case are the result of definite plans and estimates supported by a mass of detail compiled under the direction of the power section of the War Industries Board by Army engineers assigned for the work. This known increase of capacity that should be available prior to the winter of 1918-19, the cost of which is included in the estimate of \$138,427,000, is 1,233,000 horsepower.

The following is a statement of the requirements for additional power facilities and their estimated cost, based on existing governmental orders:

Power district.	Additional horsepower required for 1918-19.	Estimated cost.
Philadelphia, Chester, and adjacent territory.....	120,000	\$14,500,000
State of New Jersey.....	94,000	5,500,000
Western Pennsylvania and Eastern Ohio (Pittsburgh, Youngstown, Akron, Canton, Wheeling, Connellsville, and adjacent territories).....	440,000	35,000,000
Baltimore, Lancaster, and adjacent territories.....	53,000	3,942,000
Wilmington, Del., and vicinity.....	13,300	610,000
Pennsylvania anthracite region.....	53,000	1 8,000,000
New England States.....	75,000	14,625,000
Southern States.....	135,000	15,000,000
Miscellaneous smaller power systems scattered in Eastern and Middle West States.....	250,000	31,250,000
Pacific slope, west of Rocky Mountains <sup>2</sup> .....		10,000,000
Total.....	1,233,300	138,427,000

<sup>1</sup> Includes high-tension transmission lines.

<sup>2</sup> Now being surveyed; definite information not yet available.

The constantly increasing war program for the supply of which procurement orders in Army, Navy, and other lines of work have not yet been placed, will require a further increase in power facilities which can not be definitely determined until the manufacturing program is further developed. These further power requirements can not be assumed as less than 500,000 horsepower, and this addition should be available at least by the winter of 1919-20 if the war program is to be fulfilled. In order to accomplish this increase in time for the required service the construction should be undertaken at the earliest possible date so as to have the power facilities coming along coincidently with the additional manufacturing facilities for which the power will be demanded.

To create 500,000 horsepower additional power will require in round figures the expenditure of \$80,000,000, which, added to the above detailed estimate of \$138,427,000, makes in round figures the sum of \$200,000,000 stated in the bill.

The \$150,000 for administrative expenses was a lump-sum estimate, and is a very conservative figure.

Mr. BARUCH. I think our report will fully answer that. I have a report which is presented, I think, weekly, from every district in the United States that we can cover. We have covered these districts fairly well and have found out where there is a shortage of power and where there is a surplus of power. I have such a list here, a copy of which I will be very glad to leave with the committee.

Mr. ESCH. I think that should be incorporated in the hearing. I noticed the other day that orders had been issued suspending the work at Muscle Shoals because of the greater demand for the material in other war industries, is that correct?

Mr. BARUCH. Yes, sir.

Mr. ESCH. How can you justify that if the Muscle Shoals plant is to be primarily for war production.

Mr. BARUCH. It would not be available for at least three years, from three to five years.

Mr. ESCH. So that it could not have a material bearing upon the war?

Mr. BARUCH. No, sir; you see, they have established a fixation plant there, and they have some power; the necessary minus power being furnished by steam in the production of nitrates. They want speed; it has to be done quickly, and three or five years would be a little too long to wait. I may add this: There is not a realization of the very grave shortage that is facing us—is increasing—and will face us from now on; that is, in materials. This is a war of steel. Our estimates show that there will be required for the last six months of

this year something like 22,000,000 tons of finished steel for war needs, and the biggest production we have ever had in the history of the country has been 16,000,000 tons during that space of time, and so it is with reference to various machinery. Therefore it would not be the part of wisdom to allocate steel to anything that was not vitally necessary for the immediate purposes of the war until the vital and immediate necessities of the war were provided for. There is another problem involved in that, and it is the question of man power. The Italians, the French, and the English have combed their industries in order to get fighting men to the front, and the resources of the United States have been used for the purpose of replenishing that which they lost by combing their industries. We have come into the war and we have started the process of taking our people out of the producing units and putting them into the destructive units, which has made an enormous sudden demand upon our resources, much greater, I think, than any of us can realize. We think of the United States as being limitless in its resources; but, of course, there is a limit. What we are trying to do is to conserve for the great effort that we must put in at the proper time, to get everything that will be necessary for the immediate uses of the war, and anything that will take material and man power, which can be used for some war purpose, we feel it is our duty to postpone; it is only a postponement to a wiser time and a better time and when such things can be done cheaper and, perhaps, better.

Mr. ESCH. Of course, under this bill the production of power will be very, very largely steam power.

Mr. BARUCH. I presume so; yes, sir.

Mr. ESCH. Because of the length of time necessary to produce it by hydroelectric power.

Mr. BARUCH. Yes, sir; and the great difficulty in getting machinery.

Mr. ESCH. That means an increased demand upon the coal supply.

Mr. BARUCH. Yes, it will; you are quite correct. I might add that this bill has the approval of Mr. Garfield, the Fuel Administrator.

Mr. ESCH. I was trying to lead to that in order to see whether there was coordination in your demand for an increase of power from steam and the Fuel Administration, which is trying to speed up coal production.

Mr. BARUCH. I may add this: That they were very insistent upon this because many—not many, but I will say some of the departments—had anticipated putting up isolated or particular plants for some particular purpose. The Fuel Administrator objected to that because he thought it was more economical to use coal in a large central plant or use it where these large central plants had been increased.

Mr. ESCH. Do you anticipate a coal shortage during this coming winter?

Mr. BARUCH. I would rather answer it this way: That I not only anticipate, but I know we will have a shortage of by-product coal, in which I am particularly interested, in view of the steel production, because that is the limiting factor in the production of steel to-day.

Mr. ESCH. What about the production of gas, coke, and the chemical elements used in explosives?

Mr. BARUCH. Those things depend upon by-product coal. That is what I particularly referred to when I said there is a shortage, and there is going to be an increasing demand for by-product coal for those purposes.

Mr. ESCH. Is that one reason why you want this legislation?

Mr. BARUCH. I do not know that that formed one of the reasons in my mind, but if it was a reason it was only a minor reason; the real reason was the immediate need of this power, the quickest way to get it, and, I think, the cheapest way to get it and the only way to get it is as suggested by this bill.

Mr. ESCH. How far have you considered the saving of car equipment and motive power on railroads by developing the power near the coal supply?

Mr. BARUCH. Of course, I am speaking of my own personal opinion—others may differ—but I think that is something we ought to strive for, that is, where the production of power is by coal; it should be made at the mouth of the mine, where that is possible.

Mr. ESCH. You were led to that by the fact that the centers of production, Philadelphia, Baltimore, Norfolk, and Pittsburgh, are the congested rail centers.

Mr. BARUCH. Yes, sir.

Mr. ESCH. And anything that would relieve the congestion in rail traffic, by making the production of power near the source of coal supply, would solve the problem or help solve it.

Mr. BARUCH. Undoubtedly.

Mr. ESCH. You do not know to what extent that may help solve the problem?

Mr. BARUCH. No, sir: I do not.

Mr. ESCH. But you are convinced that it would very materially affect it.

Mr. BARUCH. Yes, sir. In order that the committee may not be under any misconception of what I had in the back of my mind or in the forward part of my mind when I asked for this bill let me say that we have got to have it to get our war program through, and it was the only feasible way we found of getting it in the time that we needed it; at the same time the subjects you brought up were factors, but they were not the dominant factors; the real dominant factor is the absolute necessity of the power and to get it to-day and not to-morrow.

Mr. DOREMUS. Is your board concerned in any way with the speeding up of the production of coal, or is that a matter which is exclusively under the jurisdiction of the fuel administration?

Mr. BARUCH. That is entirely under the jurisdiction of the Fuel administration.

Mr. DOREMUS. I do not suppose you are in a position to give the committee any information as to the efforts being made to speed up coal production.

Mr. BARUCH. I can only say this generally, that Dr. Garfield, I think, is doing everything humanly possible. I do not give him any rest myself, because the necessities arising from the things I am particularly charged with are so great, particularly in regard to coal, that I press him continually, and I find I always have a hearty response from him.

Mr. DOREMUS. Is it your judgment, Mr. Baruch, that it is just as important to speed up, to the fullest extent, the production of coal at this time as any other of our war activities.

Mr. BARUCH. I think that coal is, I might say, almost the neck of the bottle.

Mr. DOREMUS. I am glad to hear you say that.

Mr. DEWALT. Admitting, for the purposes of the argument, that it would take some time to pass this proposed legislation, what means of relief have you now?

Mr. BARUCH. I have not any. I have tried every possible means to get the departments to furnish the relief. We have a serious situation in Norfolk to-day, and, in my opinion, the war program there is going to be seriously interfered with. The population has risen rapidly from 180,000 to 450,000; in addition they are building there 4,000 more homes. We have there great points of embarkation for our troops and for materials for the other side; we have there great naval bases; it is a great port for coal; it is a great railroad center, and it is a big shipbuilding center, and the situation there in regard to power, as well as to some other things, is almost tragic. It had appeared to me from time to time—and that appearance may be due to the fact that I desire to accomplish this thing, no matter how it is accomplished, so long as we can get the thing done—that an important part of a naval base, a shipbuilding plant, a housing problem, or a gun factory, is the necessary supply of power, heat, and light; that those things are just as important as the steel and materials which go into such plants to make them finished structures. As I say, that may be due to my desire to have this thing done which is so vitally necessary, but I have not been able to convince the legal authorities, and bring them to my point of view. We have made efforts in scattered directions to bring about some little relief, but have brought about no relief of any amount. Time is the essence in this thing, and it is not a thing that wants to be done to-morrow, but to-day. I know that you gentlemen are continually harassed with that attitude, but you will find that we are properly exercised about the necessity of doing these things.

Mr. DEWALT. What I am trying to do, Mr. Baruch, is to get upon the record your concrete opinion upon the vital necessity for speedy action in this matter.

Mr. BARUCH. I can not make it too strong.

Mr. DEWALT. Let me give to you what there is within my own knowledge, and, possibly, you will reinforce what I say. I suppose it is true that everyone in this country recognizes that the Bethlehem Steel Co., which is located 5 miles from my home, is one of the most important productive enterprises that we have in this emergency.

Mr. BARUCH. I do not think there is any question or doubt about that, nor is it open to discussion.

Mr. DEWALT. They get a portion of their power from the Hauto-Supply Co., which is located near Hazelton. That electric power is generated by the use of coal and coal mines are right there. In that same district, within a radius of 15 miles on each side of the central point, there are manufactured no less than 75,000 barrels of cement every day, and that is not running at full capacity. I suppose that you would also recognize the fact that cement, while not of the utmost necessity, is in the nature of an essential for war purposes.



Mr. BARUCH. Quite so, sir.

Mr. DEWALT. In the building of concrete ships, the building of piers, wharves, etc.

Mr. BARUCH. And warehouses.

Mr. DEWALT. At this particular Bethlehem steel plant they are about to erect houses for the accommodation of four or five thousand men, as you know, the employees at that operation numbering to-day over 30,000. Mr. Grace, Mr. Johnson, and, I suppose, Mr. Schwab—although he is no longer in direct control—have impressed upon me the absolute necessity for getting more power, and if they get their power by a reduction in the power given to these various other industrial enterprises in this immediate district necessarily those enterprises will be put out of business. Now, in order to preserve their productions which are, at least in part, essential and in order to preserve the civilian necessities which you have mentioned, you deem it of the utmost importance that speed should be had in this legislation.

Mr. BARUCH. Yes, sir. There are other enterprises, equally important, that are about in the same position, and I could give you a great list of them, but I could not think of a better illustration than the Bethlehem Steel Co., which I am glad you brought up. In order that you gentlemen shall have this fact clearly in your mind, let me say that so far as those associated with the various departments and the War Industries Board are concerned, we have endeavored to find some method of doing this but we have not been able to find it. We have dealt with the departments and the War Finance Corporation, a member of which is Mr. Eugene Meyer, who was very helpful in framing this bill. If you care to call him he is here and he can probably give you some details better than I could.

Mr. DEWALT. Just one more question: Have you not, from your investigations, ascertained the fact that these electric-power producing companies are not at this time able to finance the matter themselves, although they would be willing so to do? I have in mind this very Hauto Supply Co.

Mr. BARUCH. You are quite correct.

Mr. DEWALT. They can not get the capital?

Mr. BARUCH. It is absolutely impossible.

Mr. DEWALT. Therefore it becomes necessary for the Government, if they want this power, to do this very thing.

Mr. BARUCH. You are quite right, sir.

Mr. COADY. Have you in mind increasing the productivity of the Susquehanna Power Plant?

Mr. BARUCH. I really have not the details in my mind, but I will be glad to have some one brought here whom you can ask in regard to it and every particular plant.

Mr. DECKER. Mr. Baruch, have you thought much about utilizing to a greater extent some of the power plants that are scattered throughout the country?

Mr. BARUCH. For that purpose the so-called King bill was introduced and passed, giving the right to hitch up all of these power plants, and that is being done wherever it is possible.

Mr. DECKER. I was wondering whether you could not distribute the manufacturing business a little more throughout the country.

I know you are trying something of that kind, but I did not know what success you were having. For instance, out in my country we have a lot of power. It would not be much compared with the figures I hear you gentlemen speak about, but if there are other parts of the country where power is going to waste why not make something out there?

Mr. BARUCH. You are quite correct, sir. We have made a study of those power situations, and we have put before the various departments, and we have had before our own department these facts, so that they may be considered when they have in mind the starting of a new powder plant, a T. N. T. plant, a picric acid plant, or what not. But there are other factors which enter into such a proposition. For instance, in the operation of a T. N. T. plant, where you might want sulphuric acid, you could get power and fumes, we will say, from a place like Anaconda, Garfield, or some place of that kind, and it might be said that that was a basic reason for such a plant being established there, but labor conditions and transportation would enter into the question, and the question as to whether it is too dangerous to ship to the point of consumption must also be considered. But you know, sir, we have been trying for some time to spread out through the country the manufacturing interests of the Government and keep them out of the so-called congested districts, this being one result of their having been placed in the congested districts. We have not met with as much success as we had hoped for, but we are endeavoring to do that. The President has given specific instructions that no further enlargement of plants or the creation of new facilities shall be made except after approval by the War Industries Board, and we hope in that way to spread out.

Mr. HAMILTON. You referred to districts. You referred, for instance, to New Jersey, Philadelphia, Baltimore, and so on, as districts. What do you mean by districts?

Mr. BARUCH. That is just a term we have been using amongst ourselves, in order to cover certain points on the map.

Mr. HAMILTON. In order to define power territory.

Mr. BARUCH. Yes, sir. It is just our own way of calling our attention to certain manufacturing centers.

Mr. HAMILTON. I understand. You gave us the illustration of the Newark Meadows where you propose to assemble the Eagle boats.

Mr. BARUCH. Yes.

Mr. HAMILTON. And there you need more power. There is no power there now, I assume.

Mr. BARUCH. There is power in New Jersey, but a study of the situation shows that the manufacturing which has got to take place in increasing amount is going to need more power than there is now available.

Mr. HAMILTON. What is your idea in a case like that—will you go ahead and put up a power plant, or will you convey power from some existing plant?

Mr. BARUCH. A study would be made of each particular case. One of the things we had in mind was the carrying across of a line from New York City, taking power from the Edison Co. and getting about 20,000 more kilowatts, but we have been unable to get any department to do that. Being impressed with the necessity of imme-

diatc action, I tried to get Mr. McAdoo, the Railroad Administrator, to carry the power from the Edison Co. through the Hudson tubes, which are under his command. But it does not make any difference who does this so long as the thing is done. We want to get the power and that seemed to be the quickest way.

Mr. HAMILTON. But you assume that in order to get this power quickly you will have to aid existing plants to increase their power?

Mr. BARUCH. In most every instance we would have to use existing facilities by enlarging them.

Mr. HAMILTON. Would it be necessary for you to go into new construction at such plants, outside of transmission and extension work?

Mr. BARUCH. I can not answer that in detail, but I presume that would be necessary in some cases.

Mr. HAMILTON. Suppose in the carrying out of a great project you find it necessary to construct a plant from the ground up and to invest a considerable sum of money which, of course, would be necessary—the title to that property would presumably be in the Government?

Mr. BARUCH. Yes, sir.

Mr. HAMILTON. And you are going to construct it on that basis?

Mr. BARUCH. Yes; and if I had anything to do with it, I would insist on that.

Mr. HAMILTON. How much does this bill carry?

Mr. BARUCH. \$200,000,000. In order that there may be no doubt about my answer to that last question, if that were done it might be done as an independent thing for the Government or it might be done under agreement or contract with the existing company.

Mr. HAMILTON. I understand that.

Mr. BARUCH. In that case the company would own it, but would owe the Government the money for it.

Mr. HAMILTON. And you would make a contract with that company by which, when the Government ceased to use that power, that company should reimburse the Government for the amount of money which the Government had put in.

Mr. BARUCH. Well, we would make the best trade we could, all the time looking to the fact that we wanted the power and wanted to get the Government's interest as fully protected as possible and get all the money back we could. In order that there may be no misconception about this, some of this money will, in all probability, be war waste; I do not want you to think that when we advance money we are going to get it all back.

Mr. HAMILTON. In other words, you want to get power; you want to get it in the quickest time possible, and you are going to get back all of the money you can.

Mr. BARUCH. Yes, sir.

Mr. HAMILTON. And what you can not get back you are going to consider invested in the cause.

Mr. BARUCH. Yes, sir; that is exactly the fact, and I could not have stated it better.

Mr. HAMILTON. Since it has been stated here that there is no covert purpose to promote Government ownership and that this is entirely in the open, I presume that this bill will be passed upon the idea that if the Government constructs a plant that the Government will have

the plant for sale unless it wants to run it in the execution of its own business later on.

Mr. BARUCH. Well, let me put it this way—I do not want to answer the question indirectly, but I want to answer it so that there will not be any misconception about our views: If the Government should build a plant in an isolated place where there is none, I do not know that it would be proper for the Government to announce, when it was being built, that it was going to be for sale; that there is no desire, as far as I am concerned or as far as the men I have asked to draw this bill are concerned—and I think it is a good bill and I did not draw it—to either accelerate or retard Government or municipal ownership; we want to keep that question out of it. This is a war emergency and we want to keep the conditions just as they are to-day.

Mr. HAMILTON. You want to do business without reference to that?

Mr. BARUCH. For the war; yes, sir.

Mr. HAMILTON. You want to do business with reference to the immediate problem that confronts us?

Mr. BARUCH. Yes; that is my sole idea in regard to it.

The CHAIRMAN. It may be possible that some member of the committee will hereafter want to recall you before the bill is finally acted on in order to ask you some additional questions, and I suppose that at any time on reasonable notice you would be able to come back before the committee?

Mr. BARUCH. I am available and entirely at your disposal.

The CHAIRMAN. We are very much obliged to you, indeed. I want to ask the members of the committee who are present whether it will be convenient to continue this hearing at 10.30 o'clock tomorrow morning, the hearing to last until 12 o'clock only, because the water-power bill will be taken up to-morrow, and if there is no objection we will take a recess until 10.30 to-morrow.

(Thereupon, a recess was taken until Saturday, Aug. 24, 1918, at 10.30 o'clock a. m.)

#### ELECTRIC-POWER SITUATION.

[Prepared for the War Industries Board under the direction of Brig. Gen. Charles Keller, Mr. R. J. Bulkley, Mr. F. Darlington.]

The lists inclosed herewith show districts where particulars regarding the power situation are on file at this office. These districts have been classified as follows:

1. Districts which show normal power conditions.
2. Districts where there is excess capacity.
3. Districts where there is a power shortage.

In some of the districts of the first class the power plants are small and would not handle any large increase in load.

A short statement as of date June 1 regarding each of the systems which show an excess capacity is also inclosed. As conditions are changing rapidly in some instances, the information must be considered in connection with the date of the individual report.

Localities classified as having a power shortage should not be excluded from consideration, if other conditions are favorable, without first consulting this office, as in many cases machinery is coming forward which will supply the deficiency and leave an excess for other industries.

The power situation within the cities named in the lists refers also to any adjacent territory served by the same power company.

Upon request, information will be furnished regarding the power systems in any of the districts included in the lists.

Attention is called to the fact that departmental orders have been issued closing certain districts to new contracts requiring additional power. The above lists must not be construed as affecting these orders.

## DISTRICTS WHERE PRELIMINARY SURVEYS SHOW NORMAL POWER CONDITIONS.

<p>             Abilene, Tex.              Adams, North Adams, and Williams-              town, Mass.              Alabama Power Co. (Alabama), An-              niston, Ashland, Bessemer, Birming-              ham, Roanoke, Sheffield, Tuscaloosa.              Amesbury, Mass.              Amsterdam, N. Y.              Anderson, Ind.              Atlanta, Ga.              Atlantic City, N. J.              Ayer and Clinton, Mass.              Berlin, N. H.              Bennington, Vt.              Binghamton, N. Y.              Boston, Mass.              Bowling Green, Ohio.              Brattlesboro, Vt.              Bridgeport, Conn.              Bristol, Conn.              Brocton, Mass.              Brunswick, Ga.              Carolina Power Co. (North Carolina              and South Carolina), Goldsboro,              Henderson, Marion, Raleigh, Rock-              ingham.              Cedar Rapids, Iowa.              Cincinnati, Ohio.              Chickasha, Okla.              Chicopee, Mass.              Columbus, Ohio.              Concord, N. H.              Dallas, Oreg.              Detroit, Mich.              Dixon, Ill.              Dover, N. H.              Drumright, Okla.              Escanaba, Mich.              Eureka, Cal.              Evansville, Ind.              Exeter, N. H.              Fitchburg, Mass.              Fort Smith, Ark.              Fort Wayne, Ind.              Franklin, Mass.              Gary, Ind.              Grand Island, Neb.              Great Barrington, Mass.              Great Northern Power Co. (Minnesota              and Wisconsin), Gloquet, Duluth,              Hibbing, Superior, Virginia.              Guthrie, Okla.              Hartford, Conn.              Haverhill, Mass.              Holyoke, Mass.              Hoosick Falls, N. Y.              Hugo and Fort Towson, Okla.              Illinois (northern), Chicago Heights,              Crystal Lake, Evanston, Joliet, Kan-              kakee, Lacon, Oak Park, Ottawa,              Pontiac, Streator, Waukegan.              Ishpeming, Mich.              Jeffersonville and New Albany, Ind.              Kalispell, Mont.              Kokomo, Ind.              Laporte, Ind.           </p>	<p>             La Fayette, Ind.              Lake Geneva, Wis.              Lebanon, Ind.              Leominster, Mass.              Logansport, Ind.              Louisville, Ky.              Malden, Mass.              Marion, Mass.              Manchester, N. H.              Meriden, Conn.              Marion, Ind.              Marshall, Tex.              Middleton, Conn.              Michigan (central), Battle Creek, Bay              City, Cadillac, Flint, Grand Rapids,              Kalamazoo, Manister, Muskegon,              Owosso, Pontiac, Saginaw.              Milford, Mass.              Mobile, Ala.              Monticello, Ind.              Muskogee, Okla.              New Albany, Ind.              Newcastle, Ind.              New Haven, Conn.              New London, Conn.              Norristown, Pa.              Northampton, Mass.              Oklahoma, Okla.              Okmulgee, Okla.              Ottumwa, Iowa.              Palmer, Mass.              Parkersburg, W. Va.              Plymouth, Mass.              Plymouth and Kingston, Pa.              Pocket, Va.              Portland, Me.              Pueblo, Colo.              Quincy, Mass.              Revere, Mass.              Richmond, Cal.              Salem, Mass.              San Diego, Cal.              St. Johnsbury, Vt.              Sapulpa, Okla.              Sault Ste. Marie, Mich.              Shelbyville, Ind.              Southern Power Co. (North Carolina              and South Carolina), Anderson,              Charlotte, Greensboro, Greenville,              Raleigh, Salisbury, Spartanburg,              Winston.              Spencer, Mass.              Springfield, Oreg.              Springfield, Ohio.              Stamford, Conn.              Stamford, Tex.              Stockbridge, Mass.              Stockton, Cal.              Toledo, Ohio.              Tulsa, Okla.              Utica, N. Y.              Uxbridge, Mass.              Waterloo, Iowa.              Williams, Ind.              Zanesville, Ohio.           </p>
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## DISTRICTS WHERE PRELIMINARY SURVEYS SHOW A POWER SHORTAGE.

Alexandria, Va.  
 Altoona, Pa.  
 Baltimore, Md.  
 Bucyrus, Ohio.  
 Charleston, S. C.  
 Cleveland, Ohio.  
 Columbus, Ohio.  
 Erie, Pa.  
 Easton, Pa.  
 Erie County, Pa.  
 Hammond, Ind.  
 Harrisburg, Pa.  
 Huntington, W. Va.  
 Johnstown, Pa.  
 Kansas City, Mo.  
 Lehigh district (Pennsylvania), Allentown, Bethlehem, Hazleton, Milton, Sunbury.  
 Lima, Ohio.  
 Little Rock, Ark.  
 Lorain, Ohio.  
 Lowell, Mass.  
 Michigan City, Ind.  
 Milwaukee, Wis.  
 Minneapolis and St. Paul, Minn.  
 Newport News, Va.  
 New Jersey. Bayonne, Bound Brook, Camden, Elizabeth, Hoboken, Jersey City, Montclair, Newark, New Brunswick, Orange, Passaic, Paterson, Perth Amboy, Rahway, Somerville, Trenton.

Niles, Mich.  
 Philadelphia, Pa.  
 Pittsburgh district (Pennsylvania), Akron, Alliance, Canton, Massillon, Warren, and Youngstown, Ohio; West Penn system; Wheeling, W. Va.  
 Portland, Oreg.  
 Reading, Pa.  
 Richmond, Ind.  
 Richmond and Norfolk, Va.  
 Scranton, Pa.  
 South Bend, Ind.  
 Trenton, Mass.  
 Terre Haute, Ind.  
 Texas (northeastern), Denison, Fort Worth, Gainesville, Paris, Taylor, Waco.  
 Three Rivers, Mich.  
 Watertown, N. Y.  
 Wilkes-Barre, Pa.  
 Wilmington, Del.  
 York, Pa.  
 York Haven, Pa.

## DISTRICTS WHERE PRELIMINARY SURVEYS SHOW EXCESS OF POWER.

Appalachian system (Virginia and West Virginia), Bluefield, Pulaski, Roanoke, Saltville.  
 Augusta, Ga.  
 Chicago, Ill.  
 Columbia, S. C.  
 Columbus, Ga.  
 Davenport (Moline and Rock Island, Ill.), Iowa.  
 Dayton, Ohio.  
 Elmira, N. Y.  
 Fairmont, W. Va.  
 Indianapolis, Ind.

Keokuk, Iowa.  
 Lawrence, Mass.  
 Lynn, Mass.  
 Muncie, Ind.  
 New Bedford, Mass.  
 New York City, N. Y.  
 Sheboygan, Wis.  
 Springfield, Mass.  
 Tennessee Power Co. (Tennessee and Georgia), Chattanooga, Cleveland, Knoxville, Nashville, Rome.  
 Vincennes, Ind.  
 Washington, D. C.

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
 HOUSE OF REPRESENTATIVES,  
*Saturday, August 24, 1918.*

The committee this day met, Hon. Thetus W. Sims (chairman) presiding.

The CHAIRMAN. Lieutenant, you may proceed to make a statement with reference to this bill, especially that portion referred to yesterday, which, as I understand it, was the necessity for this legislation by districts and projects of one kind and another.

**STATEMENT OF LIEUT. W. W. STANLEY, EXECUTIVE ASSISTANT  
TO MR. DARLINGTON, CHIEF OF THE POWER SECTION, WAR  
INDUSTRIES BOARD.**

Lieut. STANLEY. By way of preface, I should like to say that I have been Mr. Darlington's executive assistant in this work since the organization of what is known as the Power Section of the War Industries Board.

The CHAIRMAN. It was shown yesterday that Mr. Darlington could not be here to testify; that Lieut. Stanley was his aid in the surveys he made and was thoroughly familiar with all the facts and details of the surveys made by Mr. Darlington. That is the reason why he is substituted for Mr. Darlington.

Lieut. STANLEY. I came into this work at a time when practically nothing had been done except a few preliminary surveys made by Mr. Darlington himself for the War Industries Board, which had shown the need for some such organization as we now have in the power section. The power section itself was organized under the War Industries Board and is now officially under Mr. Baruch, although organized before he took charge of the War Industries Board.

We recognized at the start that it was very desirable to have entirely impartial surveys made of the situations, believing that they were likely to be very acute and very important. In order to secure impartiality the only men we have used in gathering the information and checking it have been Army engineers assigned to the War Industries Board through the office of the Chief of Engineers. There is one exception, the exception being civilians who are employees of the War Industries Board itself, and therefore have taken the Government oath. We have gathered, of course, a great deal of information from the power companies. They have been very glad to help us in every way they could, but in each case, and before we adopted that information as our recommendation or amended it, we have analyzed the information ourselves with Government men, so that we feel that the evidence I am going to submit to-day is entirely unbiased. It is entirely official, and we are sure it is right.

The scope of the survey that we have made has been over the entire country. Naturally at the start we had to commence with the situations that were most acute. Those situations, as I imagine you all probably know, were very largely in the eastern district, that we now call the congested district. There is only one district that we have not included in our work, and that is the so-called Niagara district, principally supplied with power from Niagara Falls. We have not handled that because it was already being handled by Mr. Bulkley and Gen. Keller for the Secretary of War, and it is a separate problem, having international complications. I understand it has been handled in touch with the Foreign Relations Committee, so we have left it out of this particular statement.

The way we attacked the problem has been something like this: The manufacturers and Government agents, depending on power for the manufacture of war munitions and material, naturally appealed to the War Industries Board when they began to find that they could not get adequate service from the power plants that were the existing sources of supply. We then sent our Army engineers out, and their

Examination consisted of something like this: They first went over all of the stations of a given company and checked up the amount of generating machinery there installed, the state of its efficiency, the operating conditions, and they looked over the whole general system to see if it were being properly run from an engineering point of view. They then took the recording-instrument records of the company to see what loads the machinery had to carry at the time of what we call the maximum or peak load.

These recording instruments are accurate, and they really show exactly what the plant had done when it has been fully loaded, and therefore supply, in a preliminary way, information as to what the plant has had to carry. The engineers then take the sheets of the company showing its customers and showing how much power those customers are authorized to take or are taking; they then go around and check up the actual customer by himself to see that he is operating with good economy and that he is really on war work. When they get through you can well imagine that they have made quite a detailed survey, and such a survey takes a great deal of time, but when they get through with such a survey they have as full a report as, I think, can be gotten from an engineering point of view. It is an accurate report of what the system is carrying, whether it is war work or not, and by checking up the amount of construction work that the various customers are carrying on and the amount of power they are asking the company to deliver them in the future, the engineers arrive at the expected load that can now be foreseen for the plant. I want to say that that kind of a survey has been made in the most critical places and in most of the larger places. It has not been made in full, although it has been made to the extent of establishing that there is a shortage, that the situation is normal, or that there is a surplus of power in a great many of the smaller places.

The reason why we did not attempt to carry it out in the greatest detail in all the smaller places is this: Trying to cover the country with a detailed power survey is a very large job. We wanted to know that we had power or that we did not have power. There was no authoritative way by which we were able to create power where we found we were short, barring the few exceptions which have been discussed, where we have tried, with proportionately very small results, to interest the departments themselves. The departments have done their best in trying to finance the situations, but their powers are limited. If there is a shortage already existant in a district, and if that district is not filled up to its full capacity with war work, we would like to correct that condition; if there is a surplus of power or if there is not a severe shortage of power in the district, and if a district is not filled up with war work, the shortage or surplus is not a permanent thing; it changes from day to day as additional contracts are placed, and as there are additional developments in the art of manufacture. Those things change the power loads of the companies who are on war work, and, in the broadest sense, the power situation is never final. We, therefore, felt that if we put a great deal of effort into the matter of going into detail as to situations that were changing continuously we would do unnecessary work, because when the time came that the companies could be financed in



some way to provide the necessary extensions, it was a comparatively easy matter to complete the engineering work and determine the extent of necessary extensions, on the basis of the then power conditions, while if we completed our surveys in advance, the governing conditions would probably be changed by the time that authority to finance could be obtained.

As a part of our work we have also gathered all the information that we could, in the time we have had, about the amount of available power. We have used this information for several purposes, but principally to try and regulate, just as far as we could, the locating of new industrial work so that it would go to a place where there was sufficient power. The figures that I am going to give you will show you divided into geographical locations, the results that we have obtained for pretty much all of the country. I am going to give, first, the eastern districts, because they are the most critical just at present. We find that in Philadelphia, Chester, and the adjacent territory there is a present installation of about 220,000 horsepower; they will require during this year and next year, on the basis of orders that are already placed, about 120,000 horsepower additional, and we estimate, in round figures, the cost will be \$14,500,000.

Mr. DEWALT. That is the cost of the additional power?

Lieut. STANLEY. Yes.

Mr. DEWALT. How much is that additional power estimated to cost?

Lieut. STANLEY. \$14,500,000.

Mr. STEPHENS. That is in the Philadelphia district?

Lieut. STANLEY. Yes. The district includes the Delaware River district down to Wilmington and up above Philadelphia.

Mr. STEPHENS. That is a shipbuilding district?

Lieut. STANLEY. Yes, sir.

Mr. HAMILTON. How much additional horsepower did you say would be required.

Lieut. STANLEY. 120,000 horsepower altogether.

Mr. DEWALT. Does that take into account the very large electric power plant located above Hazleton called the Hauto plant?

Lieut. STANLEY. The Hauto plant is already fully loaded; it is overloaded; it has not a surplus, and this does not provide for additional power installation in that plant. The Hauto plant is taken up later.

Mr. DEWALT. Have you in your mind the power that they can generate there?

Lieut. STANLEY. At Hauto?

Mr. DEWALT. Yes.

Lieut. STANLEY. 53,000 kilowatts. I beg your pardon, that is the extension for the district served by the Hauto plant. The Hauto plant by itself has only about 26,000 kilowatts which it can turn out now. It is limited by boiler capacity; it needs additional boilers, and if fully equipped with boilers it can turn out about 37,000 kilowatts.

Mr. DEWALT. Their lines run all the way across the State of Pennsylvania and down into New Jersey—you know that as a fact, do you not?

Lieut. STANLEY. Yes, sir; they spread over the whole southeastern corner of the State, and they cover principally the anthracite region. The State of New Jersey has a present installation of about 303,500 horsepower; it will require for this year and next year at least 94,000 horsepower, and we estimate the cost of the additional power required to be \$5,500,000. The district that we call "the Pittsburgh district," which includes the territory from Akron around through Youngstown, Pittsburgh, Connellsville, Wheeling, Canton, Massillon, and back to Akron—it is the western portion of Pennsylvania and the eastern portion of Ohio—now has a generating capacity of 456,450 horsepower; it will need this year and next year an additional 440,000 horsepower. The estimated cost of the addition is \$35,000,000. Baltimore, Lancaster, and the territory in between has a present installation of 167,460 horsepower; it needs 53,000 horsepower more.

Mr. DEWALT. How do you estimate its coming needs—upon what?

Lieut. Stanley. Upon the basis of orders that have been placed that are not yet in effect, or, rather, on the basis of plants that are not yet producing, but are being equipped to produce, and considering also, as one of the rather minor items, the normal expansion in the use of power by those same plants, not because they may be increased, but because, as they perfect their manufacture, they get their labor better balanced and their machines better balanced, so that they always increase their use of power from year to year.

Mr. DEWALT. In other words, you have taken into consideration the present needs and the immediate prospective needs.

Lieut. STANLEY. Only lasting through this winter and next year.

The CHAIRMAN. I understood you to say that your estimate was based upon the existing contracts.

Lieut. STANLEY. On existing contracts; yes.

The CHAIRMAN. Mr. Dewalt was not here when you made that statement.

Lieut. STANLEY. The reason why we are looking ahead to next year, on the basis of existing contracts, is because the construction work to take care of next year's load must be started right away. We know that if the increasing war program requires the placing of additional orders in these districts—the particular ones we have mentioned not now being able to take any more orders, because they are filled up—that these amounts would be still further increased.

I think I had gotten as far as the Baltimore district, having at present 167,460 horsepower; it needs 53,000 horsepower more, and we estimate the cost of supplying that as being \$3,942,000. The Pennsylvania anthracite region includes the Hauto plant, which supplies the principal power system, having the biggest territory and the largest amount of transmission lines. Wilmington, Del., and the near-by territory now has an installation of about 18,800 horsepower. It requires 13,300 horsepower more, at an estimated cost of \$610,000.

We have not a figure for the complete power installation, although I have given you the figure for the Hauto plant. There are a number of smaller plants throughout the whole district, and we have studied the Hauto system and studied some of the needs of the others.

but we have not the complete available power, much of it being in the form of power plants owned by coal mines and for coal mines. The Pennsylvania anthracite district, as far as we have gone, needs 53,000 horsepower additional. I might mention the fact that in this district is the Bethlehem plant, which was talked about here yesterday. The expenditure for the district we estimate as being \$8,000,000, including a considerable amount of transmission.

Mr. DEWALT. Will you permit me, Mr. Chairman, to ask a question at this point?

The CHAIRMAN. Yes.

Mr. DEWALT. Has it come to your knowledge that there are several power plants located in that district which might be hitched up to the Hauto plant?

Lieut. STANLEY. Yes, sir; those plants, however, so far as we have found as yet, will have a very small amount of power this summer, but will have no surplus power this fall and winter. I think there is a plant in Reading and a plant in Allentown, if I remember correctly.

Mr. DEWALT. Yes.

Lieut. STANLEY. Both of those plants will have all they can carry this winter and they would afford only very temporary help at a fairly considerable cost of interconnection. The quickest solution of the problem in that district is to increase the Hauto plant. The Hauto plant has three generators installed which are capable of carrying about 12,500 kilowatts each; they are boilered only sufficiently to run two units at the same time; the third unit was originally installed as a spare unit, to be operated so that they could shut one unit down and overhaul it and still use their boilers to the full capacity. By boilered up the plant to an extent which will let them run all three units at the same time about 12,000 kilowatts more can be thrown on the line.

Mr. DEWALT. Have you ascertained the fact that the Bethlehem Steel Co. is now demanding 7,500 kilowatts?

Lieut. STANLEY. Yes, sir. We are also familiar with the cement industry situation there and the action taken to reduce their consumption by 25 per cent.

Mr. DEWALT. That has again been cut 25 per cent more, has it not?

Lieut. STANLEY. I did not know that, sir. We are trying, as we have tried in other cases, to work out an arrangement to finance the Hauto plant through the War Department, if we can find any legal way to do it. I want to point out, though, that that is going to be a long drawn out procedure, I am afraid, not because either side is laying down, but because it is not the clean-cut way to do it.

Mr. DEWALT. I might suggest for your information, too, that it came to my knowledge this morning that there is a considerable power plant now for sale by the Allentown & Reading Traction Co., located between Allentown and Reading, for the reason that they are now obtaining their power from the Lehigh Electric Co. I wrote to Mr. Baruch this morning about that very fact.

Lieut. STANLEY. I do not think I have the Allentown situation here, because that comes within the Hauto plant system, and this is only a summary. But I think there is no surplus power there; the plant may be for sale, but I do not think it has surplus power. I will be very glad to check that up.

Mr. DEWALT. I wish you would, because it may be of interest to your department to know that that plant could be obtained and hooked up.

Lieut. STANLEY. The Hauto system is a very important system for the reason that it serves not only the Bethlehem plant and the cement industries that have been mentioned, but it also serves a great part of the anthracite coal region, and the output of anthracite coal is a very important matter, as we all know.

Mr. STEPHENS. Is this Hauto plant located at the coal mines?

Lieut. STANLEY. Yes, sir.

Mr. STEPHENS. They get their coal right there?

Lieut. STANLEY. Yes, sir.

Mr. STEPHENS. Is it soft coal?

Lieut. STANLEY. I think they burn entirely an inferior grade of coal.

Mr. DEWALT. They use what they get from the culm banks?

Mr. STEPHENS. The wastage.

Mr. DEWALT. Yes. I might say that almost all of these cement plants have electrified their plants. I know that to be the fact, and perhaps you do not know it.

Lieut. STANLEY. I have not any doubt that that is the case, but I have not been over the system myself and do not know it from my own personal knowledge. The next general geographical distribution I have here is the New England States. We have no figures that are complete for the present installation, but in 70 of the larger plants, out of a total of about 260, there is 1,200,000 horsepower; they will need 75,000 horsepower additional at a cost that we estimate to be approximately \$14,625,000.

Mr. WINSLOW. How do you expect to obtain that?

Lieut. STANLEY. It is best obtained and most quickly obtained by probably increasing the steam reserves that can be fed onto the lines of the New England Power Co. and other existing companies. The New England Power Company reaches clear across from the north-eastern corner of Massachusetts down to Providence, R. I. It has a system of transmission lines that are really a belt across the middle portion of the southern New England States; it has at present quite large hydro-developments and it has some steam development. Its lines are connected to Worcester and Providence, which both have big steam plants, and connected to a number of intermediate smaller systems with some steam capacity. The New England Power Co. has enough generating capacity to supply this portion of New England, together with the help of the steam plants now existing, when it has high water, but when it has low water, there is a shortage. The broad solution of the problem for this portion of New England is to scatter—not necessarily in the plants of the New England system itself, but in systems and in plants that can be or are connected with that system—additional steam units so that they will be run temporarily while there is low water. For instance, by supplying the night load in times of low water from steam plants, the New England Power Co. can close its dams and then carry the heavy peaks in the day time. The balanced use of water and steam would be most efficient in man power, in materials used, in resources used, and in coal consumption, which is a very important thing in New England.

Mr. WINSLOW. During what portion of the year do you estimate there is sufficient water to run that New England Power Co.?

Lieut. STANLEY. In general, and I would like to have this considered as a general statement rather than as absolutely accurate, I think they have ample water from about February until just about the present time; roughly half of the year.

Mr. WINSLOW. Has any consideration been given to the considerable waste of water power in the State of Maine?

Lieut. STANLEY. Yes, sir; we have studied a number of those powers. There are some very good powers there and there are a good many powers that can be built rapidly.

Mr. WINSLOW. A great deal of it can be developed.

Lieut. STANLEY. Yes.

Mr. WINSLOW. Enough to run New England many times over.

Lieut. STANLEY. There is an enormous amount of power there. I think that probably one reason why its development has not been more rapid in the past is that the State law excludes the transmission of power out of the State except by special franchise.

Mr. WINSLOW. That could be done now easily enough, could it not?

Lieut. STANLEY. I would like to refer that to the lawyers, because I am not absolutely clear on that myself. It has resulted in the past, however, in not forming transmission companies to send it out of the State.

Mr. WINSLOW. How closely are you connected with the coal business to control the shipment of coal into the New England States in order to have enough to run the electric plants under higher pressure than at present if they have to supply this additional power?

Lieut. STANLEY. I am glad you brought that up, sir. I should have mentioned that in stating the organization of the power section. We have been very closely in touch with the Fuel Administration, and Mr. Stewart, who is the chief of the Public Utilities Division of the Fuel Administration, has sat in the meetings of the power committee. The power committee meets once a week, and that committee consists of Gen. Keller, Mr. Bulkley, and Mr. Darlington. Mr. Stewart has been called in at their request. We have tried, and have been, I think, quite successful—because they have helped us a great deal—in arranging so that the important stations for war work will receive their coal, if there is any coal to send to them. The Fuel Administration is thoroughly alive to the situation, and I know they heartily indorse this bill. They are trying to see that the coal situation is handled in such a way as to fit in with any development that may follow our schemes, and that our schemes, if they are not practicable because of the coal situation, are not started.

Mr. WINSLOW. Would it seem to you that as a natural consequence of supplying the needed power up there it might happen that the discrimination now being made against the New England industries, because they can not get power, would cease?

Lieut. STANLEY. I think that the present discrimination against New England industries is probably less a matter of power than it is a matter of other considerations, such as railroad transportation, bringing in the raw materials and taking out the finished product, as well as labor conditions, although power has undoubtedly had some effect.

Mr. WINSLOW. I do not know how far you have gone into that commercial phase of it, but I would be interested to know to what extent you feel labor conditions are in any way holding back production in the New England factories.

Lieut. STANLEY. I am a New Englander myself.

Mr. WINSLOW. All right; we will get together on that.

Lieut. STANLEY. I know that the labor problem has been a source of considerable bother to manufacturers there.

Mr. WINSLOW. Do you mean to the manufacturers themselves or to the people in Washington who undertake to tell what the trouble is?

Lieut. STANLEY. I think to the manufacturers. I am speaking, principally, from any knowledge I have myself, about the western end of Massachusetts and the Bridgeport-Waterbury district. Those are quite busy districts, as you know, and even before we went into war I knew they were having a great deal of trouble. The men I have seen from that district since have said that the labor situation is a very real problem. I think, however, that the railroad situation has been considered more serious than the labor.

Mr. WINSLOW. Touching on the labor situation, have you had an opportunity to make a comparison with conditions in New England and other sections where they manufacture?

Lieut. STANLEY. Perhaps the best answer I can give to that, sir, is rather indirect; but I will say this and then answer anything more that I can. The so-called congested district is a district bounded on the west by a line so as to include all the New England States, the eastern portion of New York State, all of New Jersey, the eastern portion of—I guess three-quarters of—Pennsylvania, back to Altoona, I think, the line crosses, and it swings eastward and includes Delaware and part of Maryland and comes to the Chesapeake Bay just above Baltimore. That district has been closed, but not entirely for power reasons, although certain portions of it had been closed for power reasons in advance of closing the whole district; it was closed for fuel reasons, for railroad transportation reasons, and for labor reasons, the fuel and railroad problem being more or less interconnected, since fuel could not be transported in sufficient quantities when the railroads could not handle it and all the other materials necessary.

Mr. WINSLOW. It had come to my knowledge yesterday the case of a town in Massachusetts which has an empty factory ready to be equipped; that it can get machinery, now out of use, in two weeks, sufficient to fill the factory; that it can get the necessary labor to man it; and they are ready to agree to wholly operate it by the use of wood gathered from the section and without asking that any fuel be transported by the railroads; and that factory could then furnish commodities that the Government now wants very badly. Does that fit into these various propositions?

Lieut. STANLEY. That would be rather outside the power end of it. From time to time requests for information come to us from the War Industries Board about such matters—and they are scattered all through New England and these other States—but we do not pass on them at all, except from the power point of view. We say that there is power or is not power available.

Mr. WINSLOW. If it were brought to your attention that a concern would agree to make its own power and heat with wood, would you not feel that you should pass on such a case?

Lieut. STANLEY. We would naturally want them to show us that they could get the wood and that they had the generating machinery.

Mr. WINSLOW. If they did that, would you feel you ought to go into that case?

Lieut. STANLEY. Yes, sir. I think it is fair to say this: That the Fuel Administration might object if a large number of men were required to cut wood, and the Labor Department might object, and their approval might be necessary before a contract could be cleared.

Mr. WINSLOW. Why would the Fuel Administration object to wood being cut for the purpose of manufacturing an article which the Government is yelling for?

Lieut. STANLEY. They would not object to its being cut, but they would object—I am not quite clear which department would be interested—if an unnecessarily large number of men were diverted to that work when the same article might be manufactured somewhere else with greater economy of labor.

Mr. WINSLOW. But meanwhile it is not being manufactured at all in sufficient quantities, and there is no prospect of it, and yet here is a concern which is willing to manufacture something that the Government is shouting for and in manufacturing that article will not ask to have fuel delivered to it by the railroads, but will make the power and heat from wood.

Lieut. STANLEY. If there would be any question at all regarding fuel, it would seem to be a question of the total number of men required to get the wood; but I do not want you to understand that I am trying to say that that objection would be raised, and, as I say, I do not think it would come within our jurisdiction.

Mr. WINSLOW. I want to get the limits of your jurisdiction so I will know where to go.

Lieut. STANLEY. It would be a question of comparative man power, the comparative cost of production and the time of production. For instance, the example came up the other day of the Eagle boats. New Jersey is in exactly the same situation as New England so far as being closed to new business, and for the same reasons of transportation, fuel, and labor; but conditions were such that there did not seem to be any other place where they could be manufactured with benefit to the Government and the war program. There will always be exceptions as to those things which are important and which can be manufactured in some one place so much better than in another place or so much quicker, and the War Industries Board has reserved the right to approve the location of additional industries in the congested area if such a procedure serves the war program best. In other words, there are exceptions to every rule; that is all it amounts to.

Mr. WINSLOW. I do not know that this is a proper question for you to answer, but I would like to take a chance on it: Would you feel the existence of a plant—meaning the building, with power, equipment, and all necessary machinery, ready to start up tomorrow—would be a good excuse for these few men to go to work to produce articles which the Government is yelling for?

Lieut. STANLEY. From the power end absolutely, yes, sir; and, of course, I could not answer as to the other things.

Mr. STEPHENS. What do you mean by the closed district in New England?

Lieut. STANLEY. The congested district is an area walled off on the map by a line—the line passing to the west of all the New England States—therefore all of the New England States lie in what is called the congested district, and that district is closed to new contracts, requiring the additional use of fuel, labor, power, and other resources beyond the extent to which they are now being used, primarily because the Fuel Administration and the Railroad Administration say that the limit of transportation by railroads has been reached and that they therefore can not supply more fuel or materials to the district. The Labor Department, I believe, also said there was no labor for additional work there.

Mr. WINSLOW. Mr. Stephens, the proposition is this: In New England it is like the corpse that was shown in a play some years ago called "Con the Shaughran." A fellow died, and he had a stiff knee joint—it was up like this [indicating]—and he also had a lame back. They put him in his coffin in that form, with his knee sticking up this way [indicating], and every time they pressed down his knee his back would come up, and every time they pressed down his back his knee would come up. It has been the same way in Massachusetts for a good many years—it has been either power, men, or something of that sort—and for years they have been giving New England the razor in every form possible.

The CHAIRMAN. You may proceed, Lieutenant.

Mr. WINSLOW. I read in the newspapers yesterday that the New England soldiers were considered by the authorities to be the best soldiers who have gone over from this country, and we can make more of them, but they won't let us transport them.

Lieut. STANLEY. I have gotten. I think, to the Southern States, and I find a listing of plants of over 1,000 horsepower, plants smaller than that not being included. There is about 1,000,000 horsepower installed in the Southern States—exclusive of plants under 1,000 horsepower—and we estimate that the additional power required there for 1918 and 1919 is 135,000 horsepower, and that it will cost approximately \$15,000,000. I might mention that just at present the cotton manufacturing districts supplied by big hydro systems—in North Carolina, Georgia, South Carolina, and Tennessee the plants being partly hydro and partly steam—are now short of power. This is due to rather unusual water conditions, but it is also due to the fact that they are fully loaded for normal conditions, and the fact is that the water is abnormally low and there is not enough power to go around in the cotton manufacturing districts.

Mr. WINSLOW. You say there is not enough power in the South to take care of cotton manufacturing?

Lieut. STANLEY. Just at present.

Mr. WINSLOW. Would that be so around the Atlanta territory?

Lieut. STANLEY. Atlanta is short of power to-day.

Mr. WINSLOW. And yet they are introducing a \$5,000,000 proposition there to make cotton duck, when the New England factories are willing to agree to furnish all they want.



Lieut. STANLEY. The southern situation is susceptible of a fairly rapid increase in its power resources, and those are the districts that this bill should be used to help out. It is not in the congested district, as other States are, which means that it has the available fuel and labor and railroad transportation.

Mr. HAMILTON. What is the area of this southern district?

Lieut. STANLEY. It is more properly the Southeastern States, from North Carolina around through Florida and Alabama and eastern Tennessee.

Mr. MONTAGUE. Is Virginia in the congested district or not?

Lieut. STANLEY. No, sir. Now, we have here a miscellaneous group of smaller power systems which I have noted here as gathered from the Eastern and Middle Western States. Those are a great many of the relatively smaller cities and relatively smaller power companies, which, for simplicity, we put in one group by themselves so as not to confuse them with the larger electrical power systems. These particular ones that we find to be short now have a capacity of about 350,000 horsepower, and we estimate that they will need about 250,000 more. The estimated cost for them is \$31,250,000.

The last item I have in this general summary is the Pacific coast, west of the Rocky Mountains, which we are now surveying. We only have preliminary information as yet, although we have had an engineer out there for some months. It is a very big territory, supplied by companies having very big distribution systems. It is short of power, due principally to the increase in shipbuilding on the Pacific coast, and, as a preliminary estimate, we put down here a desirable expenditure for this year and next year as being probably not less than \$10,000,000.

These figures show, so far as they go, companies having a present installation of about 3,716,210 horsepower that we estimate will require additional power to the extent of 1,233,300 horsepower.

Mr. MONTAGUE. What is the total cost?

Lieut. STANLEY. The total cost is \$138,427,000.

Mr. STEPHENS. On the Pacific coast alone?

Lieut. STANLEY. No; this covers the whole summarized situation, so far as these statistics go. This information may be of interest: The Geological Survey told us that they have listed up as the approximate capacity of central stations in the country, not including any power located in individual manufacturing plants, but covering the electric light, electric power, and electric railway systems, a total of 13,693,000 horsepower. The increase that we have listed here is only 9 per cent of the present installation.

There is a figure that I could not obtain authoritatively as yet from Government sources, that the Geological Survey is now working on. It is the normal growth in percentage of installation. The figure, I think, generally accepted by engineers without question is that it averages from 10 to 12 per cent a year. So that the total increase we have listed here is not in any way excessive; it is a sub-normal increase. That simply means that the power companies have stopped their expansion; they have not expanded during the war as they would have normally, and that in listing up these figures as directly applicable to war work we are localizing the normal growth of the whole country in the war centers.

I want to emphasize very strongly one fact, that we do not pretend that these figures are final or complete so far as the whole, now known to be growing, war program is concerned. We can not predict in power what the increase of the Army to 5,000,000 men is going to mean. These figures do not make allowances for that increase. Therefore we know that the totals we have shown here are not what the actual figures, as the war program goes on, are going to be. They are not as large as that. We show in this detailed statement, from these preliminary and from the final surveys, a total of \$138,000,000. The figure of \$200,000,000 that was put in the bill was prepared from these general findings, plus the knowledge that as the Army program of 5,000,000 men came on the figures would have to be very considerably increased, and, allowing for that fact in some cases, perhaps in the great majority of cases, but anyway to a very considerable extent, the companies should and probably will advance a part of the total cost.

The \$200,000,000 figure, which is greater by about \$60,000,000 than we have listed up here as the total cost, we are very confident is not too much by any means, because as fast as the war program develops, power work all over the whole country will have to be started this fall and this winter and next spring, just as soon as the weather conditions are suitable for construction, to get plants built in time to pick up the load that will come on as the Army contracts and the Navy contracts and the Shipping Board contracts for the increased war program require power.

Mr. HAMILTON. What part of the Middle Western States have you surveyed?

Lieut. STANLEY. We have surveyed in part, although we do not pretend absolutely thoroughly. Michigan, Illinois, part of Wisconsin, Ohio, Minnesota, and some of Kentucky.

Mr. HAMILTON. What part of Michigan particularly did you survey?

Lieut. STANLEY. The big system in Michigan is the Consumers' Power Co. of Michigan. It has an interconnected line running around from the eastern and the middle portion of the State through the southern portion of the State and back up to the western side.

Mr. HAMILTON. Southeastern Michigan, more particularly?

Lieut. STANLEY. Yes. We have figures on all that system, and we have figures on some isolated systems scattered over the State, principally where there has been a shortage.

Mr. STEPHENS. How far west in the Middle States?

Lieut. STANLEY. We have been at the places where shortages have appeared in Oklahoma and in Missouri and Arkansas, I think, and have had a little bit, although not much yet, to do with Texas. I am not absolutely clear as to all these places; I am only giving what I can remember.

Mr. STEPHENS. Did you go into Iowa and Nebraska?

Lieut. STANLEY. We got into Iowa; I am not sure about Nebraska, but I think we have been there.

Mr. STEPHENS. It is not important.

Lieut. STANLEY. This book, by the way, has only a sheet for each system, and the system itself may serve a number of towns, but it is not divided by States, but by cities, so I can not offhand check the places we have examined in each State.

Mr. MONTAGUE. Do your figures show the relative proportion of the sources of the power of steam and water-power plants?

Lieut. STANLEY. In making the report we list up the generating capacity under those headings, so much steam capacity and so much water-power capacity.

Mr. MONTAGUE. What is the relative proportion?

Lieut. STANLEY. The total figures for the country?

Mr. MONTAGUE. Yes.

Lieut. STANLEY. I do not know.

Mr. MONTAGUE. Approximately, is it more water power or more steam power?

Lieut. STANLEY. I should guess that it was to-day considerably more steam power, but that is a guess absolutely. I could try to get some figures on that if you would like to have them.

Mr. MONTAGUE. Have you those figures with reference to the New England district, or any particular district?

Lieut. STANLEY. We have, so far as we have surveyed the plants. We do not have them in that form, but we have the data; it simply needs to be added up to get figures for those systems where our surveys have been made.

Mr. STEPHENS. The figures given in debate the other day were six and one-half million water power in the United States that was developed.

The CHAIRMAN. I would say that nearly all of it is steam installation. It takes too long to put in water installation to meet emergency requirements.

Mr. MONTAGUE. I would like to have those figures. I imagined that the most of those installations were steam.

Lieut. STANLEY. The figures for installed capacity I have given from our surveys are of a combination of the two, but I have no summary dividing them and added them up as so much steam and so much water. They are both included, though, in these figures. Let me correct my statement. I think I may not have quite understood you. They are both included in the figures on the present generating capacity. The figures that we show here for additional capacity are almost entirely steam.

The CHAIRMAN. That is what I had reference to.

Mr. MONTAGUE. Do some plants transmit power to other plants wholly within the States?

Lieut. STANLEY. They do both within the States and outside of the States. There are some steam plants now operating that transmit power from State to State. An example is the Beach Bottom Plant at Wheeling, W. Va., which transmits power into the Pittsburgh district. It transmits west into Ohio over the line of one company and east into Pennsylvania over the line of another company.

Mr. MONTAGUE. Is that the transmission of electrical power?

Lieut. STANLEY. Yes.

Mr. MONTAGUE. For the operation of what?

Lieut. STANLEY. Principally coal mines and steel mills. That is, in the coal and steel district. One of the things that very commonly has come up in our survey is the problem of the interconnecting of existing companies just as far as it is possible and desirable, and this will undoubtedly have to be done in a number of cases. The solution

of the Pittsburgh distribution, for reasons of time if for no other reason, would mean that that whole territory should be connected up. There are nine different companies, I think, in it. The figures here give the totals of installation and the totals of necessary expansions of those companies as a group, but an interesting figure in that district is that if proper interconnections are made for the war emergency we save 150,000 horsepower of installation in the way of spares. That is, the fact that if transmission lines are so constructed that the power can be delivered from the various stations located in that territory to any part of that territory—one station transmitting it along, relieving the load to the next one so that it can shove it further ahead—the spare problem is very much simplified, and a few spares scattered throughout the whole territory will serve for the whole district instead of each separate station having to keep idle a unit as big as its largest unit in order to make itself safe in case of breakdown.

Mr. HAMILTON. These plants so interconnected will be devoted exclusively to governmental business?

Lieut. STANLEY. They would be devoted to what we call war work, including direct governmental orders, a fairly large proportion of business that is not direct governmental orders, but is necessary for the war work, including the subcontracts of the direct war contractors or the subcontracts of those subcontractors, or forms of work at plants without which the country can not carry on the war. It also serves the necessary civil life of the community.

Mr. HAMILTON. That is local?

Lieut. STANLEY. That is local.

Mr. HAMILTON. Does it not necessarily follow that the proposition involved in this bill assumes that these industries, these plants, are to be devoted practically exclusively to war business? Otherwise you would be scarcely justified, would you?

Lieut. STANLEY. I would not like to have myself considered as the final authority on that.

Mr. HAMILTON. I think you know about as much as anybody who is likely to come before this committee as to these matters, and I think very highly of your opinion.

Lieut. STANLEY. I think it can be taken as a final conclusion only if you adopt the basis that the life of the country is a war measure. The supply of power to a city or between States, from city to city, as we have laid it out, is necessary for the life of the community, and if for only such proportion of the life in a community as is necessary and contributory to carrying on the war; that proportion is practically 100 per cent of the life of that community.

Mr. HAMILTON. That is, war business?

Lieut. STANLEY. Yes. In those districts where the severe shortages have come up there is practically nothing else going on.

Mr. HAMILTON. Is there a secondary or supplementary war business that is carried on by these plants, the power for which is proposed to be increased by this bill?

Lieut. STANLEY. If I understand you correctly, I will be very glad to give some examples. We feel it essential that street railroads shall run. The people have got to live; they have got to go to work; they have got to come back from work. We feel it is essential that the houses of the laboring men shall be lighted decently with elec-

tricity. We, however, try to stop the wasteful use of electricity wherever we can. Power must be supplied to food concerns to enable the people to be fed, and so on. All those things, and many others that I could mention, may not appear to be war work, but are included in our basis of war work.

Mr. HAMILTON. In other words, the ordinary living conditions of the people must be sustained?

Lieut. STANLEY. They must be sustained.

Mr. HAMILTON. Every member of this committee, I suppose, has this phase constantly presented to him: In the various districts represented by us there are manufacturing companies seeking war orders, properly enough. Those plants have the power and are prepared to fill orders of certain kinds. They send their agents here to Washington. They are more or less dazed by the conditions that surround them and they practically get nowhere. We do our best to refer them somewhere. Frequently they go away without anything. Now, we are spending a lot of money here to increase the power of the country. There are many of these things where the question of transportation is not particularly vital. As far west as the district I represent—the southwestern part of Michigan—there are a good many companies which are manufacturing war orders, but which could do a good deal more in this direction, and are unable to secure orders. There are other companies which have power to spare, but are securing no war orders. Would it not be a good idea, while spending the money belonging to the people for the increase of power, also to connect those industries which have power with business—that is, while you are connecting places by electricity for more power, why not connect other places which have power with more business.

Lieut. STANLEY. In the monthly report that we prepare for the War Industries Board—I think Mr. Baruch left a copy yesterday—we list up the places we have examined under three general headings: Those places which show normal power conditions. That means that they are neither overloaded nor have any undue amount of surplus. Next, those places which show power shortage, and, third, those places which show a power surplus. This monthly report is now being circulated through, I think, the majority of the contracting departments of the Army and the Navy. We have from time to time applications from firms who want to take a Government contract and have agreed on prices with the contracting bureau and the question of location comes up. Their natural choice is their home town. The location among other things goes before the War Industries Board to be approved. Now, wherever we say that we can not permit, for power reasons, a plant to be expanded or located in that locality, we try to get this list to the contractor and explain that if he will go here or there, or the other place, he can find power, and that for reasons of power these are the places that he ought to go to. We are therefore trying as well as we can to redistribute or divert new work to power centers.

Mr. HAMILTON. Ought there not be some way by which these manufacturers could be able to obtain pieces of contracts without having to resort to the large contractor, who necessarily desire to manufacture as much as he can? Several smaller men may be able to utilize a good deal of power with a great deal of benefit to the coun-

try; may be able to make the products faster than the big contractor. Yet I suspect that there is a vast amount of this energy, this power, that is not being used because these contracts are given to the big fellow.

Lieut. STANLEY. I am treading on ground that I am not sure of, because I do not know; but I rather doubt that. We have found that a very big proportion of the war demand load does not come from the enormously big contractors. It comes from the little fellow, who is making a part of a shell, for instance.

Mr. HAMILTON. Do the little fellows have to go to the big contractors to get their work?

Lieut. STANLEY. Many of those are direct Government orders, so far as I know. Some of them are subcontracts; I do not know just what the situation is as to that kind of thing, but there is the tool-making industry, for keeping the plants equipped, and keeping their machine equipment up to date and in good shape for carrying out the big war contracts. The big war contract itself is an enormous feeder of small work in a district, and not necessarily for parts of its own work. The small work is incidental to its work. That is, the outside work, the small work, does not eventually go directly into the shell, or whatever they are producing; but it is the incidental things for their factory, tools, and supplies of all kinds.

Mr. HAMILTON. A few days ago there was called to my attention the case of a corporation engaged in the manufacture of bench vises. They have a lot of surplus power; they are able to manufacture a good many things that the Government might require. They investigated, but do not seem to be able to land anywhere. I do not know, myself, how to help them. Yet, there is plenty of energy, plenty of ability, and plenty of willingness.

Mr. MONTAGUE. Is that power water or steam?

The CHAIRMAN. I want to remind the committee that we have a very important matter coming up on the floor this morning and that we will have to adjourn in a few minutes. I want to ask the lieutenant to come back Monday morning so as to submit himself to interrogation by the members of the committee. We have arranged for Mr. Meyer, of the Finance Corporation, to be heard at 10 o'clock, so we will have to interrogate Lieut. Stanley after that.

Mr. DEWALT. Mr. Chairman, I have here to-day Mr. G. S. Brown, who is president of the Alpha Portland Cement Co., who has just submitted to me a very succinct statement in regard to this eastern district of Pennsylvania, about which the lieutenant spoke. He has also given me the report of Mr. Crane, the general manager of the Hauto plant in this eastern district, and I think they would be very informing to this committee.

The CHAIRMAN. Your request is that he be called?

Mr. DEWALT. Yes, sir.

The CHAIRMAN. There is no objection to the printing of the reports, and I think it would be advisable to do so.

Mr. DEWALT. I ask unanimous consent that Mr. Brown be called if we deem it necessary, and to have the statement of Mr. Crane also incorporated in the record.

The CHAIRMAN. That will be done.

Thereupon, at 12 o'clock, noon, adjournment was taken until Monday, August 26, 1918, at 10 o'clock a. m.

**BRIEF ON REQUIREMENTS OF ELECTRIC POWER BY CERTAIN CEMENT PLANTS IN THE LEHIGH VALLEY DISTRICT, BY MR. G. S. BROWN, PRESIDENT ALPHA PORTLAND CEMENT CO.**

About the 9th of August, 1918, Maj. MacLaren, of the power division of the War Industries Board, called on G. S. Brown, president of the Alpha Portland Cement Co., at his office in Easton, Pa., and explained that he had been sent out by the War Industries Board, in response to complaints of the Bethlehem Steel Co. that power which it had purchased from the Lehigh Navigation Electric Co. was not being furnished by the latter company, to seek a remedy for the trouble.

He explained that he had made an extended survey of the situation about four months earlier and had come to the conclusion that the Lehigh Navigation Electric Co. would be able to meet its contract obligations with the Bethlehem Steel Co. He stated further that the demand of the steel company had increased until it was necessary, if its requirements were to be supplied, that some of the customers of the electric company be obliged to give up a part of the power being used by them. He also explained that practically all of the power generated by the electric company was used in the production of coal, the production of cement, the operation of the steel plant, and the operation of public utilities; not more than possibly 2 or 3 per cent being used for what might, by any stretch of the imagination, be classed as nonessential. He, therefore, thought he should recommend to the War Industries Board that 25 per cent of the day load of the cement companies be taken from them and given to the steel company.

This would be equivalent to reducing the production of the cement companies from 15 to 18 per cent. Further investigation developed the fact that this reduction in power delivered to the cement companies would furnish only temporary relief to the steel company and that by the spring of 1919, if the same method of remedying the trouble were to be followed, no power would be available for the cement companies during the day. This is equivalent to saying that they could not operate, since cement operation is continuous for the 24 hours of the day. Attention is therefore directed to certain facts in connection with the cement industry.

*Introduction.*—The Portland cement industry in the United States originated in the Lehigh Valley, its chief development taking place between 1895 and 1907. At the present time 16 companies are operating in this district, extending from New Village, Vulcanite, and Alpha, N. J., through Martins Creek, Stockertown, Nazareth, Bath, Northampton, Siegfried, Cementon, Coplay, Ormrød, Chapmans, and Evansville, Pa. These companies produced in 1917, 23,581,000 barrels of Portland cement.

*Companies affected by the proposed reduction of power.*—Six of the 16 companies have contracts with the electric company for their power. These six companies are: Alpha Portland Cement Co., plant No. 4, at Martins Creek, Pa.; Nazareth Cement Co., plant at Nazareth, Pa.; Penn Allen Cement Co., plant at Bath, Pa.; Lawrence Cement Co., plant at Siegfried, Pa.; Coplay Cement Manufacturing Co., plant at Coplay, Pa.; Whitehall Cement Manufacturing Co., plant at Cementon, Pa.

Except the Whitehall Co., which is just changing to the electric company's power, these plants are entirely dependent on the electric company for power. The demand on the electric company by the five companies, eliminating Whitehall, which takes at present only 500 kilowatts, is approximately 15,500 kilowatts continuously. These six companies manufactured during 1917 7,130,000 barrels of cement, which is slightly more than 30 per cent of the cement manufactured in 1917 in the Lehigh Valley district.

*Negotiations for electric power.*—Early in 1913 the gentlemen responsible for the construction of the electric company's plant at Hauto, Pa., began to negotiate with the various cement companies seeking contracts for power. As noted above, the Portland cement industry developed in this region; consequently few, if any, of the companies had strictly modern power plants. In addition, nearly every plant was overloaded, resulting in more or less frequent costly shutdowns, and in some instances requiring large expenditures to modernize and enlarge. Further, the industry had grown rapidly in the Lehigh Valley and before this time it had been possible to find other deposits of material suitable for making Portland Cement in various parts of the United States, with the result that the market for the Lehigh Valley product was

seriously curtailed, and nearly all companies were operating with reduced earnings.

The electric company offered a means of overcoming some of the difficulties. They claimed to be able to furnish power as cheaply as the most modern plant could manufacture, and cheaper than most of the cement companies were manufacturing for; their large output would take care of wide variations in demand, as contrasted with the already overloaded plants of the cement companies; a reduction in the number of men employed by the cement companies, a strong argument then as now; the elimination of the problem of coal supply for power; a freedom from loss of time due to breakdowns, or, stated differently, a continuous, constant, and elastic supply of power; a more efficient power as far as plants using line-shaft drive was concerned; a much smaller capital outlay than if individual modern plants were erected by the various companies; and, finally, a long-term contract renewable for further long periods.

These arguments were convincing to the Lawrence and Alpha companies, and in 1914 the electric company began supplying power to these two companies. The statements made by the power company were shown by experiments to be close approximations to actual facts, and additional cement company contracts were made from time to time with the electric company until, instead of 4,000 or 5,000 kilowatts furnished the cement industry in 1914 by the electric company, there is now being furnished approximately 16,000 kilowatts. In use it developed that the power was uniform, regular, elastic, and generally satisfactory, consequently the various companies gradually dismantled their individual power plants, with the exception of the Whitehall, and are now entirely and absolutely dependent on the electric company.

*Cost of installing this power.*—The companies referred to have expended in changes to their plants in order to make this power available, large amounts of money. The amount varied with the different companies from \$50,000 to \$260,000; the gross amount being approximately \$770,000.

*Investment in plants concerned.*—The companies represented in this brief have invested in their business in real estate, buildings, equipment, supplies, and working capital sums varying from \$900,000 to \$4,570,000; the total for the six plants being \$17,180,000. This large investment is represented by securities in the hands of the public of \$1,185,000 bonds, and \$9,760,000 stock. The balance of the investment being surplus. Approximately 20 per cent of these securities are held in the Lehigh Valley itself and at least 50 to 75 per cent in the State of Pennsylvania.

*Men employed and wages paid.*—In the plants represented are employed directly 1,900 men, whose wages per annum at the present rate amount to over \$2,500,000. A large number of these men have been employed for a long time in their respective plants; have purchased homes for themselves, and would find it difficult and expensive to adjust themselves to other employment. The curtailment of output or closing of these plants will be a very great loss to the communities. Applying the usual measure, not less than 10,000 people are dependent directly upon the prosperity of these plants, in addition to half as many more who thrive by reason of collateral employment.

*Saving of coal, transportation, and labor.*—The installation of electrical power has resulted in the saving in the plants represented of 306 men daily and approximately 280,000 gross tons of coal per annum. Granting, for the sake of argument, that other plants could make up the shortage of cement caused by closing these, surely the saving of men and coal and transportation represented by the above, in these times when man power is so important, coal supply so short, and transportation so difficult, aside from any other factors, should be compelling reasons for keeping these plants in operation.

*Cement an essential product.*—When so much is said as to the necessity for curtailing those trades and industries which do not directly enter into the successful prosecution of the war, consideration should not fail to be given to the fact that at the present time between 30 and 60 per cent of the shipments of these companies goes directly to the United States Government. Of the balance nearly all goes to the repair or extension of plants directly engaged in producing material necessary for the prosecution of the war, or the repair and extension of transportation facilities so badly needed, or to the increasing of production and conservation of food products. These facts are shown by sworn statements filed monthly with the priorities division of the War Industries Board, and are the basis for the preference in coal and other supplies enjoyed by the industry. At this time coal operators are ordered to supply 100 per cent



of cement plant contracts and orders, being preceded on the list only by railroads, public utilities, by-product plants, steel mills, and tidewater (chiefly for bunker purposes) coal.

*Loss of good will and trade.*—Should the recommendation of Maj. MacLaren be carried to its logical conclusion, then, next spring, all of these mills will be idle. With the exception of the Whitehall and the Alpha all will be obliged to discontinue their business entirely. Alpha will be greatly curtailed, about 67 per cent in this district; Whitehall somewhat curtailed. Their trade and the good will, which represents the labor of many years and the expenditure of large sums of money, will be destroyed. No estimate of the damage to these companies in this respect can be ventured.

*Conclusion.*—It should be noted that the cement companies have for years been depending on this power, while the steel company has only recently begun to use it and that—while duly advertised by the electric company that it could not furnish additional power—the steel company has gone on extending its plant and increasing its power demand without in any way making provision to supply the same.

The failure of the electric company to arrange to care for this additional power will be fully covered in a brief to be submitted by it with this. A number of methods by which relief may be procured will be suggested and it is urged that an essential business be not destroyed because the Bethlehem Steel Co. did not properly provide for its own necessities.

It is respectfully submitted that the electric company, in view of the above facts, should be directed to continue to supply the cement companies with the power needed, giving to the Bethlehem Steel Co. what surplus they may have.

#### SUPPLY OF POWER BY THE LEHIGH NAVIGATION ELECTRIC CO.

The Lehigh Navigation Electric Co., which is supplying power to the Bethlehem Steel Co., represents:

- (1) That they have a plant at Hauto, Pa., with a capacity of 30,000 kilowatts.
- (2) That the load supplied in June, 1918, from this plant was 36,000 kilowatts, made up as follows:

	Kilowatts.
Bethlehem Steel Co.....	9,500
The cement companies.....	15,000
Coal companies.....	7,500
Miscellaneous power.....	4,000
Total .....	36,000

Of the miscellaneous power, amounting to 4,000 kilowatts, five public utilities take 3,200 kilowatts, and the remaining 800 kilowatts is supplied to 31 customers, ranging from 1 to 171 kilowatts each.

- (3) That additional power is obtained from the Harwood Electric Co., who have a 20,000-kilowatt plant at Harwood, Pa., and from the Lehigh Valley Transit Co., who have a 20,000-kilowatt plant at Allentown, Pa.

- (4) That the Lehigh Navigation Electric Co. is acting as the operating company for the following subsidiary companies of the Lehigh Power Securities Corporation; Harwood Electric Co.; Lehigh Valley Light & Power Co.; Hazleton Steam Heating Co.; Schuylkill Gas & Electric Co.; Stroudsburg Electric Light & Power Co.; Shenandoah Light, Heat & Power Co.; Columbia & Montour Electric Co.; Northumberland County Gas & Electric Co.; Northern Central Gas Co.; and the Lehigh Valley Transit Co. (power house and substations).

That these plants are all connected together by transmission lines and the power houses operated to give the maximum capacity with the most economical operation, and that they include electric service to the following large cities in the northeastern part of Pennsylvania: Stroudsburg, Bethlehem, Allentown, Coplay, Catasauqua, Northampton, Mauch Chunk, Lehigh, Slatington, Hazleton, Mahanoy City, Shenandoah, Berwick, Bloomsburg, Danville, Sunbury, Milton, Emaus, and gas service to several of these cities as well as Williamsport, Pa., and that they also supply current for lighting several towns on the Philadelphia division of the Lehigh Valley Transit Co., and that the territory served includes a population of about 600,000.

(5) Including all these companies and the Lehigh Navigation Electric Co. for the month of May, the current sold was divided as follows:

	Per cent.
Cement .....	29.8
Coal mining .....	16.3
Machine shops (including Bethlehem Steel) .....	17.0
Textile mills .....	4.5
Public service corporations .....	19.5
Lighting .....	5.3
Miscellaneous (including ice plants, brick plants, etc.) .....	7.6
Total .....	100.0

(6) All power plants of the affiliated companies are now loaded to capacity, and are carrying a peak of 67,000 kilowatts for one hour, with an average daily load of 50,000 kilowatts.

(7) That the Bethlehem Steel Co. has made a request for 12,000 kilowatts in addition to their contract demands of 7,500 kilowatts, and have told us that they will require an additional 15,000 or 20,000 kilowatts in the next four or five months, and that they were counting on the Lehigh Navigation Electric Co. for the supply of this power as they have made no arrangements to take care of it in their own plant.

(8) That the coal mining companies and other war industries on the system of the Lehigh Navigation Electric Co. and its affiliated companies have told us that they will require 15,000 kilowatts additional in order to take care of demands for increased output by January 1, 1919.

(9) That the Navigation Electric Co. had ordered and started work on an additional 10,000-kilowatt unit to be in operation in the summer of 1918, and an additional 30,000-kilowatt unit to be in operation early in 1919; but on account of the impossibility of borrowing money this work was discontinued.

(10) That during the months of January and February our New York office presented miscellaneous data to the Power Committee of the War Industries Board of the Council of National Defense as to the general power situation, and under date of March 1, through the same channels, a complete study of this situation, with definite suggestions as to the manner in which the power requirements could be cared for, with cost involved and time necessary for doing the work. A number of conferences were held, and, again, on April 27 a complete memorandum on this subject was presented through the same channels, with a copy to the Federal Fuel Administration and the Pennsylvania Fuel Administration.

(11) That the Lehigh Navigation Electric Co. has not the funds, and can not borrow the funds, to go on with this work, and that it is necessary that the Government furnish financial assistance of some sort to permit this work being carried on, and that these plans are still possible of execution if the money is obtainable on a reasonable basis.

(12) That these plans contemplate that 70,000 kilowatts can be installed, with necessary transmission lines, etc., for approximately \$7,000,000; that 200,000 kilowatts, with the necessary transmission lines connecting Philadelphia, Trenton, etc., can be installed for approximately \$20,000,000.

(13) That temporary relief can be obtained as follows:

Place.	Amount of power.	Cost.	Time necessary.
	<i>Kilowatts.</i>		
Allentown .....	5,000	\$150,000	4 months.
Reading .....	5,000	300,000	8 months.
Hauto .....	15,000	1,600,000	Do.

(14) Finally, the navigation company represents:

(a) That the cement companies were the first customers of the power company, and it was the contracts for these companies that enabled the power company to start operations, and that last fall one of the largest cement customers told us that they had a market for their steam equipment and, before selling it, wished to know if we were in a position to take care of their power requirements. At that time we made a careful canvass of our customers,

including the Bethlehem Steel Co., and, with the enlargements to our plant which we expected to install, we told them that we would be fully able to meet their power requirements, so that we feel a moral as well as a contractual responsibility for supplying power to the cement companies.

(b) That the Lehigh Navigation Electric Co. spent considerable money in the development of the Coxe Stoker and the burning of the smaller sizes of anthracite fuel, and it was through these experiments that this stoker was developed to a point that made the burning of the smallest sizes of anthracite fuel possible.

(c) That they have installed a laboratory and an efficiency organization for securing the best results in the burning of anthracite and bituminous fuel, and have an operating organization that is capable and equipped to handle large power plants in an economical and satisfactory manner.

(d) That their engineers have located suitable sites for power plants in the anthracite coal fields which will use this small size fuel and render unnecessary the use of railroad equipment and coal that would otherwise be required for transporting fuel to a large number of small isolated plants.

It has been estimated that the electrification of the anthracite mines now operated by steam would release 8,000,000 tons of coal per annum that is now used for power purposes.

It would also release 3,750 men now used for power production in the mines. If these men were put to mining coal a further annual production of 2,000,000 tons could be counted on.

If this 70,000 kilowatt were installed it would release 840,000 tons of coal which would otherwise be required to operate the several isolated plants. The transportation of this coal would require the use of 16,800 fifty-ton cars, or one train of 56 cars each daily.

(e) That they have a capable engineering organization to design and build these power plants.

(f) That much of the equipment that was ordered for additional power is still on order, although the production is held up and can be rushed through to completion at an early date.

(g) That they should be able to obtain financial assistance so that these plans can be put into effect at the earliest possible moment, in order that there will be a suitable supply of power available in their territory to increase the mining of coal and supply the requisite assistance to the Bethlehem Steel Co., American Car & Foundry Co., Milton Manufacturing Co., Worthington Pump Works, cement plants, and other manufacturing plants and manufacturers of war materials in their territory.

(h) That they are willing to place their organization at the disposal of the Government in every possible way looking to the successful prosecution of the war and supply of power for the production of the necessary materials required.

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COMMITTEE ON INTERSTATE  
AND FOREIGN COMMERCE,  
HOUSE OF REPRESENTATIVES,  
*Monday, August 26, 1918.*

The committee met at 10 o'clock a. m., Hon. Thetus W. Sims (chairman), presiding.

The CHAIRMAN. The committee will come to order. Mr. Dillon will make the first statement this morning.

Mr. Dillon, will you kindly explain to the committee the necessity for this legislation, giving your name and present position?

**STATEMENT OF MR. CLARENCE DILLON, REPRESENTING THE  
WAR INDUSTRIES BOARD.**

Mr. DILLON. Some months ago we began to get complaints in the Philadelphia district and around Pittsburgh from people that had Government contracts that they could not get power to carry out their contracts. Mr. Baruch then had an investigation made of the

situation, and the War Industries Board sent a man to go over all the existing contracts that the power companies had, and also over all the applications which they had received for power which they were not able to fill, and he found that there were very large demands for power for actual war orders, which power could not be supplied.

The same sort of a careful analysis was made in Pittsburgh, Philadelphia, and in what we call the New Jersey district, and the same facts were found in each case.

Then the different power companies were called down to Washington to discuss the question of furnishing additional facilities. These companies said that they were unable, themselves, to furnish the money to put up any additional facilities at this time; that they would have to have help. After those individual meetings there was a general meeting held in New York at which the various power companies from these districts and their bankers were present, and in this general discussion it developed, from the statements of the bankers, that the various power companies were unable to get the money themselves. When this situation was made clear to Mr. Baruch he went to the various departments, the War Department, the Navy Department, and the Shipping Board, to find if they had any funds available by which they could assist these companies. It developed that the Navy Department had none. The Shipping Board had a small amount. The War Department had no funds available for this purpose, but they could secure probably small amounts which could help in a very insignificant way.

Then Mr. Baruch asked Mr. Meyer and some other gentlemen to prepare a bill to relieve this situation, as it was eminently critical, and unless we did get relief the whole war program would be very seriously curtailed and we would fall down on our program this winter, and next year we would be in a hopeless position regarding the program as laid down for that time.

We had hoped before Congress adjourned to get something through at that time, but when it was found impossible to do anything before the recess, we then arranged with the War Department, the Navy Department, and the Shipping Board to divide those three territories, giving Pittsburgh to the War Department, Philadelphia to the Shipping Board, and New Jersey to the Navy, and asked them if they could not do something pending legislation to help this situation. Nothing has been done at all by the Navy in New Jersey; nothing has been done by the Shipping Board in Philadelphia, although the Shipping Board are negotiating with the company there to try to reapportion their power to get some small relief pending this legislation, but any such relief will be infinitesimal.

In Pittsburgh the War Department has made one small contract with one of the companies there whereby the War Department furnished 40 per cent of the cost of the new development and the company financed 60 per cent. Under the terms of that agreement the War Department will absorb any war wastage, as the plant will be taken over after the war by the power company at an appraised valuation at that time. This contract was very clumsy and difficult to handle because the War Department had no funds for that purpose. The only way they could help was to make advanced payment on the power purchased and then to arrange an adjustment of the price of

the power purchased in order to take care of the war wastage on the high price of construction at this time.

Trying these things out has convinced us all that it is impossible to get relief in this way; that all that can be done is very trifling, and that unless we get some broad, comprehensive way of working the situation out we are going to fall down on our war program. That is the plain English of it.

All the money that is asked for in this bill will not be lost by the Government by any means. The money will be advanced in each case under special conditions surrounding that case, just as a banker would loan money to any particular company. It will be handled in the same spirit, and I am convinced that a very large part of this money will be returned to the Government.

I can not say anything too strong in the way of impressing upon you gentlemen the necessity of pushing this legislation with all possible dispatch.

The CHAIRMAN. I suppose your statement is practically just supplementing the statement of Mr. Baruch and Secretary Baker?

Mr. DILLON. Up to this point that is true.

Mr. ESCH. You say you called down to Washington the representatives of the power companies and laid before them the situation and the need for increasing power. In that interview were the terms upon which the Government was to make advances, as per this bill, presented?

Mr. DILLON. No; no specific terms in those early interviews were taken up. It was to ascertain whether the companies themselves could do this.

Mr. ESCH. Well, has any effort been made to get the views of the power people as to the terms, as set forth in the pending bill?

Mr. DILLON. Mr. Meyer can answer that particular question better than I can, because he worked on the particular bill with the various companies.

Mr. ESCH. You stated that there were some funds available in the Army appropriations and Navy appropriations and possibly appropriations for the Shipping Board that had been or could be utilized in aid of increasing power production.

Mr. DILLON. You did not understand me if you thought that was what I said. I said that the Navy said they had no funds that could be used for that purpose. The War Department has no funds that it can use for increasing power production. The way they were able to execute this one contract was by purchasing power and making an advance payment against the power to be delivered. They had to buy that power to do that, and that only covers a very small part of the situation.

Mr. ESCH. Was that the instance cited by Secretary Baker, to the effect that through some circuitous way they were able to get some increased production?

Mr. DILLON. It was.

Mr. ESCH. You have no direct authority then to make any advances or to purchase a plant in order to increase power production?

Mr. DILLON. No.

Mr. ESCH. Didn't the Army appropriation bill a year ago give the War Department power to commandeer any plant or industry necessary for war production?

Mr. DILLON. Yes; they can do that, but it is not adaptable to this power situation—there is no one power plant whose entire production is needed for the Army. You understand if they commandeer a plant they would have to commandeer that plant for the benefit of the Shipping Board, the Navy, and the civilian population as well.

Mr. ESCH. In other words, they could not segregate the purpose?

Mr. DILLON. That is it exactly.

Mr. ESCH. The War Department therefore has not availed itself of that power given in the Army appropriation bill to commandeer plants?

Mr. DILLON. In connection with power?

Mr. ESCH. Yes.

Mr. DILLON. It is not practical to do it.

Mr. ESCH. For the reason you have stated?

Mr. DILLON. Yes.

Mr. ESCH. Practically all power plants deliver power for many other purposes besides war production.

Mr. DILLON. You may call it all war essentials.

Mr. ESCH. For the War Department.

Mr. DILLON. For many necessities other than the War Department, such as Navy, Shipping Board, etc.

Mr. ESCH. You stated that the \$200,000,000 asked for in this bill would not be lost by any means; that the wastage would be a loss.

Mr. DILLON. Yes.

Mr. ESCH. Have you any idea, or can you formulate any idea, as to the percentage of such wastage?

Mr. DILLON. That would be a very difficult matter because to formulate that means you have to assume conditions after the war. Equipment is all more expensive to-day than it was before the war. Whether that equipment is going to go back to the prices that existed before the war is largely problematical. The general opinion is that it will go off somewhat from present prices, but there is an equally broad opinion that it will not go back to the lowest prices that existed before the war. The terms under which funds are advanced will be such that as power is delivered a certain amount of the advance will be taken care of, and the longer the Government takes power the more of the money advanced will be returned. Those contracts will be made each one upon their merits, and each will undoubtedly have different terms and conditions. But if you use that power for any length of time it is reasonable to suppose that a very large part of the money will be recovered. If you increase those plants and the war comes to a very abrupt termination and you do not use a great deal of that power, in that event the war wastage of that equipment may be larger. The Government need not sell those plants at the termination of their own contract. That can be determined by agreement.

Mr. ESCH. These power plants now in existence, and the plants that may be constructed by the Government under the bill are, I take it, in the congested manufacturing areas largely?

Mr. DILLON. That is not necessarily the case. There are areas not particularly congested that are also short of power. The particular places that are worrying us at present are in what you might call the congested districts.

Mr. Esch. Yes; that is where you made your intensive investigation?

Mr. DILLON. That is where the intensive shortage developed.

Mr. Esch. Well, now, my question is this: After the war is over these added power facilities, being located in areas where there is a big demand for power, do you contemplate that much of such additional power plant facilities will be dismantled after peace comes?

Mr. DILLON. I do not contemplate that.

Mr. Esch. So that those new plants, or the additions to existing plants in these areas, are liable to survive the war; to that extent, therefore, the \$200,000,000 would not be a waste?

Mr. DILLON. That is it, exactly.

Mr. Esch. Of course, the terms and conditions upon which those additional power facilities, existing plants, would be taken over would depend upon the terms of this bill?

Mr. DILLON. Yes; and the terms of the particular negotiations covering each instance. That money should be advanced and loaned by the Government, just as it would be by a private banker on the same terms and under the same safeguards, to protect that money of the Government.

Mr. Esch. But it is conceivable that a power plant may be constructed by the Government under this bill in a locality far removed from a market, so that when peace comes it might not be possible to continue the utilization of that power plant.

Mr. DILLON. That is possible, but no power plant would be built except to supply power to some industry.

Mr. Esch. They might grow right up around the plant.

Mr. DILLON. But that industry would always need power. It is a question whether the industry will be running after the war, but there would be no power plant built in an isolated place not furnishing power to anyone. They would furnish power to essential industries. That would be the only justification for building the power plant.

Mr. WINSLOW. What use do you think would be found for the excess power over the normal that you are providing for now when the war will be over?

Mr. DILLON. If that is excess power, there will be no use for it, but the way it has developed in the past has been that what we have built in any year and thought was excess power, in the subsequent years we found was not excess power.

Mr. WINSLOW. Yes; but would you contemplate—of course, that is the theory—but would you contemplate the reduction of the use of power following the war?

Mr. DILLON. I think that it is reasonable to assume, for the time being, that there might be such a reduction.

Mr. WINSLOW. Then you would feel that this would apply to the ultimate consumption of the power now established, rather than what might be established for purely war purposes?

Mr. DILLON. Yes; I personally think that immediately after the war the industries that were using the bulk of this power would not have the use for all the power they had been using, and therefore there would have to be a redistribution of that power, although other industries to which we are now denying power now would

then be ready and willing to take power, so there would be a readjustment of that power.

Mr. WINSLOW. Don't you feel that with the power that you contemplate establishing that there will be more than the normal amount on hand when the war is over, for all purposes?

Mr. DILLON. Possibly.

Mr. WINSLOW. Then how would you finance the properties that you want to turn over to the now existing power companies? How would you finance the turnover at the end of the war if there was not the immediate use for all this extra power that you are establishing now?

Mr. DILLON. Well, you can do that in two ways. You can advance this money to companies for extensions against the purchase price of the power, and you can use a part of the purchase price of that power to amortize a part of your advance. You can also agree at the end of that time on an appraised valuation if you sell it, and you can give yourself latitude so that you do not have to offer it for sale the moment the war is over, in that period of depression that may come, but you may carry it through if you like.

Mr. WINSLOW. Do you think there is anything in this bill that contemplates the final control of power by the Government in places where it may be established?

Mr. DILLON. I do not. That point was discussed in drawing the bill, and everyone connected with it was as careful as they could be to avoid in any way touching on that subject. We left that question open to be decided at some future time. Mr. Baruch, particularly, spoke of that on several occasions, and we were all agreed that that issue must not be brought into this bill in any way.

Mr. WINSLOW. You feel that the bill is so drawn as to preclude that?

Mr. DILLON. Yes. It is the intent that it should be so drawn, and I feel that it is.

Mr. WINSLOW. Do you think that the establishment of additional power for war purposes as provided for in this section would tend to relieve the New England manufacturers from the restrictions now being put upon them?

Mr. DILLON. Yes; I think more power there will relieve the situation. The coal situation would be materially helped in New England. That field is now being surveyed by the power section with just that point in mind.

Mr. WINSLOW. Do you know to what the experts feel that the lack of power is due?

Mr. DILLON. To increased activities, but I have not the detail figures of the power section on that.

Mr. HAMILTON. Mr. Dillon, you are on the War Industries Board in some capacity?

Mr. DILLON. Yes, sir; I am there assisting Mr. Baruch.

Mr. HAMILTON. This power has to be furnished, or is to be furnished, for the purpose of increasing facilities for the production of munitions of war, I take it, things used particularly in war?

Mr. DILLON. Not entirely. If you mean that all this power is to go to the making of guns or shells—no; because a certain amount of power is absolutely essential indirectly for the production of those



munitions of war; in other words, to keep up the life of the community. Street railway transportation, for example, must go on.

Mr. HAMILTON. I understand that. There is a local necessity in every case.

Mr. DILLON. But power will not be increased in order to give additional power to a piano manufacturer, for instance.

Mr. HAMILTON. Precisely not. Now, what particular lines of production have you in mind in connection with this increased power?

Mr. DILLON. It is most varied. Practically every industry comes under it.

Mr. HAMILTON. Name some of the larger matters.

Mr. DILLON. In the districts that we were just talking about, of course those happen to be the manufacturing districts where the output is varied. I can not say that it is largely anything. It is practically everything that goes into shipbuilding, everything that goes into the making of munitions—that is, guns and shells; everything that goes into the making of engines, machinery, and trucks—I think you are perfectly safe in saying that the total industry that goes into our war program is what we have in mind right now, and practically every branch of that industry is affected by power shortage that exists to-day.

Mr. HAMILTON. But the primary reason for the increase in power is for use in conjunction with the increase of the output of war materials?

Mr. DILLON. The necessity for the production of materials for carrying on the war is what has made the increase in power necessary. That answers it, does it not?

Mr. HAMILTON. Yes. Now, I am simply asking these questions as bearing upon the inquiry of Mr. Esch about the probable utilization of this increased power after the war.

Mr. DILLON. In the manufacture of war essentials we get right to the fundamental industries of our modern life. Practically every industry, with few exceptions, is called upon for increased production, so that the use of this power after the war depends largely upon our national life after the war, on general industry and trade.

Mr. HAMILTON. It depends upon our national life; it depends upon our local consumption and our foreign trade and all those things.

Mr. DILLON. Exactly. We are not using this power for the conduct of business that is useless when the war is over.

Mr. HAMILTON. And, of course, it could be utilized in every business?

Mr. DILLON. Yes, sir.

Mr. HAMILTON. And we hope that there will be business.

Mr. DILLON. Yes.

Mr. HAMILTON. That is about all there is to it.

Mr. DILLON. That is all that anyone can say.

Mr. PARKER of New Jersey. Mr. Dillon, are you able to state whether after the Civil War our business and prices did not increase for five years—until 1870—notwithstanding the taking away of war business?

Mr. DILLON. I do not know, sir, except from general hearsay.

Mr. PARKER of New Jersey. There are plenty of statistics on that subject.

Mr. DILLON. I have not studied those statistics.

Mr. PARKER of New Jersey. Haven't you heard that there was a general advance in prices and business up to the year 1870? There was a setback then until 1873, but no great fall until that date.

Mr. DILLON. That has been my understanding and impression.

Mr. PARKER of New Jersey. And if that were the case in this case there would be no loss then from prices?

Mr. DILLON. No.

Mr. PARKER of New Jersey. Are not central power plants connected with various manufactories available for quite a distance from the power plant?

Mr. DILLON. They are.

Mr. PARKER of New Jersey. For what distance?

Mr. DILLON. You can get that from the experts. I understand that power can be transmitted commercially 200 miles. But I would much rather you would obtain such facts from the engineers. I am not an engineer.

Mr. PARKER of New Jersey. There is no doubt about the practicability of transmitting it 100 miles anyhow?

Mr. DILLON. No.

Mr. PARKER of New Jersey. And is it not claimed that there is a great saving in power over the production of power by each industry, in so far as the varying wants of such industries by night or by day or by seasons can be averaged as between local power produced?

Mr. DILLON. That is very true.

Mr. PARKER of New Jersey. Is there not a great saving also in establishing your power plant where coal is cheap?

Mr. DILLON. Provided the use of power is within an economical radius from that point.

Mr. PARKER of New Jersey. And is there not also a great saving in repairs of plants, etc., in a single central plant, compared to a great many smaller ones, and in the wages of engineers, etc.?

Mr. DILLON. Yes; there is a great saving in operation.

Mr. PARKER of New Jersey. Is or is there not, therefore, and has there not been for some years a disposition in the communities for various manufacturers to connect themselves with some central power plant?

Mr. DILLON. There has been that tendency.

Mr. PARKER of New Jersey. It has not gone very far as yet, however?

Mr. DILLON. No; but the tendency is marked in every industrial community.

Mr. PARKER of New Jersey. And if that tendency remains after the war, and there is such saving, may we not fairly expect a great demand for power after the war from various industries which are now not connected with central power plants?

Mr. DILLON. We may, and that may be sufficient to use the entire power extension which we are now contemplating. The fact that we can furnish power to the small consumer cheaper than he can make it would induce him to discontinue his own production of power and this might take up the entire slack that would come after the war.

Mr. PARKER of New Jersey. Would or would not that result have a direct effect in taking away smoke from the cities?

Mr. DILLON. Yes; unquestionably.

Mr. PARKER of New Jersey. And are there any by-products that could be used in these central power plants, or is the coal entirely consumed?

Mr. DILLON. The coal is largely consumed.

Mr. PARKER of New Jersey. Well, would it be entirely consumed or would there be any by-products from such a power plant, such as coke, for instance?

Mr. DILLON. As I understand it there would be no by-products unless you put up a battery of coke ovens to furnish power. Of course some of these power plants may be constructed in connection with by-product coke ovens. In that event of course there would be a large saving in by-products.

Mr. PARKER of New Jersey. I understand that the great movement in favor of water power and hydroelectric power has been for the sake of getting central power plants of this sort, which are, as I understand it, available only in certain localities, where large coal plants can be used almost anywhere.

Mr. DILLON. Quite correct.

Mr. PARKER of New Jersey. Has there ever in the history of this country been any power plant constructed which has not immediately found more than enough use for all the power that it could furnish in peace times?

Mr. DILLON. That has been my understanding.

Mr. PARKER of New Jersey. There has been a shortage of power everywhere and never a surplus?

Mr. DILLON. I have never known of a surplus.

Mr. ESCH. That must be modified, especially with reference to the Northwest—Washington, Oregon, and portions of California—where they have a surplus of waterpower beyond the ability to market.

Mr. DILLON. I was speaking of the manufacturing centers.

Mr. PARKER of New Jersey. Plants already constructed?

Mr. ESCH. Yes; there has been a surplus for some years. It may be that the shipbuilding industry on the Sound now has utilized that surplus.

Mr. PARKER of New Jersey. Then I will limit this to the manufacturing centers, whether of the East or West or South. Has there ever been an excess of power in those centers?

Mr. DILLON. I have never known of a surplus or excess of power in those centers.

Mr. PARKER of New Jersey. On the contrary there has been a shortage of power and a demand for all that could be furnished?

Mr. DILLON. Yes; to my knowledge in the industrial communities that has invariably been the case.

Mr. PARKER of New Jersey. Then, as I understand your testimony, you think it is fairly to be expected that after the war is over the developments of manufacturing which are made will largely continue, though not exactly in the same form, and there will be a demand for all the power that is made by these power plants?

Mr. DILLON. I feel that eventually all the power that is made by these power plants will be consumed in the normal processes of business. Whether it will be immediately after the war I am not prepared to say. There may be a certain slack, but I feel convinced that this power is going to be consumed right along in the normal operations of business after the war.

Mr. PARKER of New Jersey. But if there is the same increase of business that took place after the Civil War, it may be immediately after the war?

Mr. DILLON. It may be.

Mr. PARKER of New Jersey. That is all I have to ask.

Mr. DEWALT. Just one question, Mr. Dillon. What is the comparative difference in cost, if you know, between power generated by coal, steam power, and electric power, we will say, at a point 100 miles distant from the generating plant of the electric power company?

Mr. DILLON. I am sorry I can not answer that question.

Mr. DEWALT. That is all.

Mr. SWEET. I understand, Mr. Dillon, that this \$200,000,000 in the bill is to loan to private concerns for the purpose of increasing their facilities, their efficiency in producing power for the manufacture of munitions? Is that the understanding?

Mr. DILLON. For war essentials; war necessities. It may be for shipbuilding; it may be for things other than munitions.

Mr. SWEET. But what security is contemplated?

Mr. DILLON. All the security that the company has. I mean we will take the same security that private bankers would require to make such loans. Certainly you will have the security of the plant that is built with the money which you advance. You will have all of that, and in many cases you will have additional security.

Mr. SWEET. Have any private companies or plants made application for money at this time?

Mr. DILLON. I would rather have you ask Mr. Meyer of the War Finance Corporation about that. He can answer as to the direct applications that have come to the War Finance Corporation. At the War Industries Board every power company that we have asked to increase its facilities has said they couldn't do it without help.

Mr. SWEET. The implication is that they want more money in order to increase their facilities and efficiency.

Mr. DILLON. If we want more power. They do not seem disposed, of their own initiative, to want to increase their production. They say the cost is too high at this time, and rates do not justify further expenditures at the present cost of construction; so their position is that they are willing to do it if it is a Government necessity, but they themselves are unable to finance it. We have checked that back through their bankers and find it is a fact, that they are unable to finance it themselves.

Mr. SWEET. In arriving at that \$200,000,000, what was taken into consideration? Is that purely an estimate?

Mr. DILLON. No.

The CHAIRMAN. Will you excuse me just a moment? You were not here when Lieut. Stanley appeared. Lieut. Stanley went over every detail of that.

Mr. SWEET. All right.

The CHAIRMAN. He is really the one prepared to give that information.

Mr. DILLON. I was just going to refer to his testimony.

Mr. SWEET. Very well; that is all.

Mr. SNOOK. Your demand for this money is largely for its expenditure in what you call the congested districts of the country?

Mr. DILLON. It is to be expended where the demand for power is greatest.

Mr. SNOOK. I say that is largely in what you call the congested, the eastern portions of the country?

Mr. DILLON. Yes; largely there at present.

Mr. SNOOK. What, if any, study has the board made of the question of making a wider distribution of these war contracts throughout the country and avoiding the necessity of this?

Mr. DILLON. The board are considering that continually. They feel that is one of their cardinal functions, to do just that thing, namely, distribute these contracts, and the President has ordered that no construction work be carried on in any district unless the War Industries Board have satisfied itself that there are no available facilities that can be used for the manufacture of that particular article.

Mr. SNOOK. I heard Mr. Stanley's testimony, but what I want to get is if any study has been made of the subject of distribution.

Mr. DILLON. The War Industries Board has formed branch offices and divided the country into districts and they are working on that very thing now. They have prohibited construction work in what you have termed the congested districts. Nothing more can go in there.

The CHAIRMAN. Did you get through with your examination, Mr. Winslow?

Mr. WINSLOW. No; I would like to ask a question or two.

Is your board looking ahead now beyond the first stages of a demand for power, to perhaps what you might call the second stage, namely, for those industries which are being classed as non-essential at the moment, but which ultimately are bound to find a field for their products?

Mr. DILLON. Yes; we have a division in the War Industries Board that is studying just that thing, and they are also taking industries which you term "nonessential," which we call "less essential," and are figuring out whether they can convert those plants into more essential work, and in so doing they will increase the production capacity in the country for war essentials and make a greater demand for power.

Mr. WINSLOW. In view of that, are you making your provisions sufficiently elastic to properly accommodate those less essential industries?

Mr. DILLON. That is our intention.

Mr. WINSLOW. Or will you have to come back and ask for a further consideration?

Mr. DILLON. I think that will have to take care of itself. At the present, as far as we can see, this bill will take care of the needs of the country immediately and throughout the coming year 1919. What the demand for power will be after that depends upon what the military program is. As we see the military program to-day we hope that we have taken care of the situation with this \$200,000,000.

Mr. WINSLOW. Would you feel that the production of the necessities of life, say like clothing, socks, neckties—whatever you will—will be apt to be greater as time goes by, by virtue of the fact that stocks may be exhausted, supplies may be manufactured to less ex-

tent, and so a shortage may be created which will have to be looked out for in the future?

Mr. DILLON. I think that the demand for any kind of clothing, or anything which the Army uses, will be greater rather than less.

Mr. WINSLOW. I meant for the civilian population.

Mr. DILLON. Civilians will probably economize more than they have, which may tend to offset the fact that the Army is using more. If civilians use at their present rate of consumption your statement will be correct, but if civilians economize in the use of underclothes and neckties, etc., that would help to supply the demand of the Government.

Mr. WINSLOW. What is the condition of the shoe industry, with reference to fitting out people not in the Army? Is there a sufficient production possible now?

Mr. DILLON. Is is my understanding that at the present time the total production capacity in the shoe industry is in excess of the requirements of the Government and the essential war-time requirements of the civilian population. This is on the assumption that the civilian population will practice economy in this matter.

Mr. WINSLOW. And all that is being looked after?

Mr. DILLON. Yes; it is all being taken care of. There is a particular department of the War Industries Board looking after just that thing, leather and the products made from leather.

Mr. HAMILTON. Just one question, Mr. Dillon. I want to ask you, Mr. Dillon, if it is true that industries not engaged in the production of what might be called war materials have been to a considerable extent put out of employment, or their production taken away.

Mr. DILLON. There has been and is a very decided shortage or scarcity in certain of the fundamental materials of manufacture. The policy of the War Industries Board has been to fill the vital needs of the country first, and in taking care of those vital needs it has developed that certain industries whose product is not as vital for the immediate purposes of the country have not been able to get their raw materials.

Mr. HAMILTON. Couldn't the power used in those industries be utilized?

Mr. DILLON. That is all being done. This situation has arisen after all the power has been taken from industries that have not been using their full quota—it has been taken from them and given to the others, and still this shortage exists.

Mr. HAMILTON. What machinery has your board for the placing of orders for war necessities with the smaller concerns in the country at large, say, whose business has been reduced by reason of war necessities?

Mr. DILLON. First, the War Industries Board does not place orders. The orders are placed by the purchasing departments of the Government. The War Industries Board has no appropriation and spends no money in purchasing supplies. It buys nothing.

Mr. HAMILTON. But what is the machinery by which some corporation that has lost business may be given this war business?

Mr. DILLON. The machinery is this: We have in the War Industries Board what we call the conversion section. If there is, for example, a company which has been making pianos and there is no longer a

demand for pianos, this section's business is to know it. It lists such companies and when the War Department sends over an order for gun stocks, for example, the War Industries Board, through that section, recommends that those gun stocks be placed with those piano manufacturers around the country who have the equipment for doing woodwork and can make gun stocks.

Mr. HAMILTON. That is an excellent idea. That is actually being done?

Mr. DILLON. That is actually being done. It is one of the largest departments of the War Industries Board to-day.

Mr. DEWALT. What is the name of that board?

Mr. DILLON. That is called the "conversion section of the War Industries Board."

Mr. HAMILTON. But a letter addressed to the War Industries Board would be referred to the conversion section, I suppose?

Mr. DILLON. It will reach the conversion section. We do not wait for the people to write to us, but we have canvassed the country for every business that has been curtailed by their products not being in so great demand. We then list a description of their plant and their facilities in the conversion section. A man goes over that plant and then when orders come through from any of the purchasing departments they are referred to these plants, if they can do that particular work.

Mr. HAMILTON. You realize that Members of Congress are constantly being written by constituents engaged in manufacture, whose business has fallen off and who have what you might call idle power that could be used for the production of war material.

Mr. DILLON. If those come to the War Industries Board, they will have very prompt and business-like attention, and the board would be very glad to get any such inquiries, because it will help them in listing the productive capacity of the country.

Mr. PARKER of New Jersey. In my district there is a man making sash and blinds—a woodworking concern. He has been sending to the War Department and the Navy Department about this matter. Ought he to write to the War Industries Board?

Mr. DILLON. Yes; if he will send a letter to the War Industries Board telling what his facilities are they will be very glad to have it and will list that information, and when orders come through which could be manufactured by him, they will refer his plant to the purchasing bureau, stating that here is idle capacity which is available for that purpose.

Mr. HAMILTON. I will write your board soon. I hope my letter will reach you personally.

Mr. DILLON. If you will direct it to me, I will be very happy to see that it has very prompt attention.

Mr. WINSLOW. How has that canvass of plants been made?

Mr. DILLON. By the local boards. The War Industries Board has established local branches in various sections of the country.

Mr. WINSLOW. That is just getting under way?

Mr. DILLON. Yes.

Mr. WINSLOW. My recollection of the testimony of Mr. Stanley is that you contemplate under this bill increasing the power by 1,300,000 horsepower?

Lieut. W. W. STANLEY. That, sir, was about the figure of what we had listed up to date. We do not consider that final. We think it is likely we will increase that from now on.

Mr. WINSLOW. The normal increase of power for the country is about 10 per cent?

Lieut. STANLEY. That is a general estimate in the engineering profession. That is not from Government authority. I could not get any official Government figures on it, but we believe that is substantially right.

Mr. WINSLOW. So what percentage would the 1,300,000 horsepower be as against 10 per cent normal increase?

Lieut. STANLEY. It is about 9 per cent. It is a little smaller than the normal increase.

Mr. WINSLOW. Now, Mr. Dillon, based on that statement would there ever be any likelihood of having any unused power when peace will come if the increase provided for in this bill is 1 per cent below normal?

Mr. DILLON. Below the normal increase of any 12 months in the past?

Mr. WINSLOW. Yes.

Mr. DILLON. If business is normal I should say there would be no surplus power. It depends entirely on the condition of business immediately after the war. I am convinced that eventually, after we pass any slump that may come—I am not sure that there will be a slump, but should there be—after that time I am sure that the power that we are now contemplating producing will all be used.

Mr. WINSLOW. So that this artificial stimulus by the Government provided for in this bill would only about make good the normal increase?

Mr. DILLON. That is my opinion.

Mr. WINSLOW. That is what I wanted to bring out.

Mr. HAMILTON. Of course, I suppose it would be anticipated by optimists that we may get some of the trade that Germany has been monopolizing heretofore. In other words, that we should not be so solicitous to increase Germany's trade as we have been heretofore, and we want to supplant Germany necessarily and properly, and that ought to increase our output.

The CHAIRMAN. Mr. Dillon, we are very much obliged to you.

We will now hear Mr. Meyer. Mr. Meyer, please state what position you hold, and make any such statement as you see proper with reference to the necessity for this legislation.

#### STATEMENT OF MR. EUGENE MEYER, JR., DIRECTOR OF THE WAR FINANCE CORPORATION.

Mr. Chairman, I have been a director of the War Finance Corporation since its formation.

Previously I was connected with the work of the War Industries Board under Mr. Baruch. I had charge of the nonferrous metals department and cement for Mr. Baruch, but in addition assisted him in work of a general nature as called upon by him.

The power question came up with the beginning of the survey of the power requirements initiated by the power section, and as the shortages became evident, actually and prospectively, a method of



handling them was sought. As Mr. Dillon and other gentlemen have said, there is no apparent method by which the departments can handle the situation. As a matter of fact, it is almost impossible that any given power situation should be a matter of interest to only one department. It is a matter of interest to almost all departments in every one of the big power markets; therefore any advances, even if they could be made by one department, would be made for the benefit of the others also, and there would be involved a regulation of the relations between various departments with respect to the matter which would be complicated and difficult.

From a financial point of view the handling of the situation for power is difficult for a variety of reasons. First, as stated, there is the difficulty of getting money from any of the departments in sums that are adequate to the need; and, second, there is the fact that this requirement is a national military necessity, and so far as control and normal usefulness are concerned the power companies are principally of local interest. The National Government steps in now and calls upon the local community, through its company, to provide a national emergency military need. One might say that this has to be done regardless of cost, from the military point of view, but the question at once comes up, Is it fair to impose on the local community for all time the burden of carrying this improvement, built up at these abnormal costs, at the expense of the local community? Rates, of course, are based on investment principally, the other features depending on the attitude of the local public service commission and on the contract and franchise conditions governing the operations of the companies in the community. Naturally the committee would feel that a special local burden was imposed to meet what is really a national necessity.

Another difficulty lies in the fact that the entire financial structure in public utilities is meeting considerable difficulty in providing its financial necessities of a normal character, and certainly it is more difficult to finance the needs of the abnormal character. These difficulties lie in the nature of the business. The price for their product is largely fixed in some cases by contract and franchise, and in other cases there is the difficulty of adjustment on account of local rules, regulations, and political conditions, and even by conditions in the nature of the business.

For example, some of the street railways, which are, of course, often combined with the power companies, found that when they raised their transportation rates they did not add to their revenue. Traffic fell off, jitneys competed on advantageous terms, and the rate increases did not work successfully.

The cost of operation, on the other hand, the costs of labor and materials for the manufacture of power and gas, and for conducting transportation, have uniformly advanced, and generally on a very radical scale. So that you can see the margin of profit has been diminishing in a general way in public utilities.

Of course this makes the security less attractive as an investment, less safe to the investor, and it has proven a real hindrance to financing all public-utilities corporations; more, of course, to the less financially strong, but even considerably to the heretofore financially strong.

Now, the Federal Government's interest, of course, is military primarily, but it also is being compelled to take part in the financing of these added requirements under the present conditions, and it has an interest from a financial point of view. That interest, as I see it, is to provide the needed financial assistance as promptly as may be to meet the military requirements; to do it in such a way as to make it clear exactly how it is done, so that there may be no misunderstanding either on the part of the community or the companies or the national interest.

This bill is intended to do that thing and to provide a method for doing it.

If I may, Mr. Chairman, I will read from my letter to Mr. Baruch transmitting this bill. The bill was guided in its framing by myself at Mr. Baruch's request, and I wrote him some weeks ago as follows:

In guiding the framing of the bill I have endeavored to protect the Government's money to the fullest extent, and also to show clearly the methods by which this is done. On the other hand, I have sought to have the bill evidence an attitude of fairness to the public-service corporations and to the local communities which are being called upon to furnish the additional power. I have discussed matters fully and fairly with representatives of the various points of view on public-service questions, and the endeavor has been made to keep this bill a bill to obtain power and to protect the Government's financial interest in its funds advanced.

It has been my special effort to avoid making this bill the incidental or accidental means of accelerating or retarding public ownership of public-service corporations.

This bill, gentlemen, was drawn with exactly those ideas in mind. The public ownership of public-service corporations is a big question of policy, and I felt that if you gentlemen would pass a bill as a war emergency measure, it should be absolutely what it pretended to be, and that it should be made, neither by intention nor even unintentionally, a vehicle for anything else. I felt that the bill had a better chance to pass quickly if it avoided the question of public ownership and stood plainly and simply for what it was intended to be, a bill to obtain power, to furnish the financial assistance that is necessary, and to set the whole matter forth clearly, protecting both the Government's interest and the public interest, and at the same time being fair to the corporations.

Of course, I would like to add this, that in the work of the War Finance Corporation we are constantly facing the question of financing public utilities. Under the terms of that act it is very difficult in most cases to finance through the War Finance Corporation, because we are compelled to get a certain margin of security and lend on terms which Congress carefully set forth.

Public-service corporations usually are allowed to issue, by the public-service commissions, securities for not over the absolute value of the investment of the money expended. It is difficult for them to have any free assets in their treasury which enable them easily to provide us with the margin which the law requires.

Furthermore, there is the important element of war waste. The attitude must be well defined by which that war waste (which is the abnormal cost of construction under present conditions—an indeterminate figure at this moment) can be absorbed. We would be unable to say that an improvement or addition had a value from a loaning point of view to the War Finance Corporation of the full

amount of its cost. So that this bill provides a method to take care of that excess cost by which the War Finance Corporation may legally, and with full regard to the restrictions in it, cooperate with the administration of this bill to help. Otherwise the War Finance Corporation could not undertake the burden of financing public-service extensions, many of which may be necessary for military purposes only. Some of these additions will no doubt have very great value, others partial value, and I think it will be only in minor cases that they will have very little value. Such, for instance, would be interconnecting systems between companies that previously have not had any such system but on which it may be necessary under the administration of this bill to spend some money.

One of the gentlemen mentioned the question of the power consumption in what are called less essential industries in these times. The essential is judged purely from the military point of view, but some of the same less essential industries, from a military point of view, of course, are, as we all know, very essential from an economic point of view in other times.

This bill has a clause which will give ample power to the President's nominee under the bill to redistribute and allot power, having in mind, of course, principally, the military need and its urgency. That power must be exercised with discretion and intelligence, and, presumably, it will be.

As to the quantity of power, viewing it from my experience in the War Industries Board, I would not feel that we had enough power unless we appeared to have had too much. The curve of growth of the operations of this country in this war is so rapid that no man can say to-day what the need will be a year or 18 months hence. It takes a long time to build power plants. If we discover that we are short of power, that we have underestimated radically, it will be impossible quickly to provide the deficiency. A power plant requires a long period for construction, and time is so important an element in military operations that, personally, I feel that a very liberal view must be taken of the requirements, in order to provide the margin of safety with respect to power that we ought to have from the military point of view. That would be true, of course, in every other activity which it takes a long period of construction to provide the capacity that is necessary, where the requirement is of so fundamental a nature as is power.

The by-products clause, which was mentioned here this morning, is intended to cover the by-products incidental to the production of power, where the character of the coal and other conditions warrant it. It is not intended to be a bill to provide for the general coking of coal, except so far as incidentally it happens to be an economical or military advantage.

The CHAIRMAN. Mr. Meyer, have you finished your preliminary statement?

Mr. MEYER. Yes, sir.

The CHAIRMAN. As far as you wish to go without being interrogated?

Mr. MEYER. Yes, sir.

Mr. ESCH. Mr. Meyer, you are the draftsman of the bill?

Mr. MEYER. No, sir; the bill was drafted by Mr. Gans and Mr. Bulkley. I guided the drafting of the bill and its general policies.

Mr. ESCH. Well, that is sufficient for my purposes.

In the testimony presented here, as I understand it, the Niagara field was eliminated from the surveys. Is this bill sufficient to give the President power to enlarge the power facilities of Niagara?

Mr. MEYER. I think so.

Mr. ESCH. Up to the treaty arrangements?

Mr. MEYER. I think it gives the President full power. It was intended to.

Mr. ESCH. And you intended to cover Niagara as well as the others?

Mr. MEYER. I think it covers anything in the United States. I understand that Niagara had been specially treated by the War Department, and an arrangement has been made for a redistribution of power in the Niagara district, which is working fairly satisfactorily. Some power had to be taken away from certain industries which, while not able to spare it readily, nevertheless could arrange to use power in other districts. For instance, the Aluminum Co. of America, which had a large amount of power at Niagara, was made to give up a considerable part of its power, and it had to rely on production of power in other parts of this country and in Canada to meet the deficiency to the extent that it was able.

Mr. ESCH. Now, with reference to some details of the bill, on page 2 you give a definition of the word "operator."

Mr. MEYER. Yes, sir.

Mr. ESCH. And you refer to "any plant." Would it be advisable to insert the word "power"?

Mr. MEYER. Well, I would like to say that I think that the word "operator," as used in the bill, is only applied to plants in the bill. Possibly that word inserted might be an improvement. Practically, I think it would not change the meaning, because as used in the bill following the definition it only refers to power plants.

Mr. PARKER of New Jersey. Excuse me there, but you have in clause 1 of section 2—it starts with gas, coke, and all that, and it would certainly cover the plants mentioned in clause 2 of section 2 on page 4, where you construct plants for gas, coke, toluol, etc.

Mr. MEYER. Well, that clause empowers the President to construct such power plant or power plants as he may deem necessary in connection therewith.

Mr. PARKER of New Jersey. And afterwards you are allowed to acquire plants.

Mr. MEYER. Acquire the plants, as Mr. Esch said, and you would get any plants you wanted to.

Mr. ESCH. This deals primarily with power.

Mr. MEYER. Yes. The definition of these terms, of course, is strictly the definition for the purposes of this bill, and the word "operator"—it is simply defined for the use of the word "operator" as used in the bill.

Mr. ESCH. Is it necessary to insert the definition of the word "property" in subsection E, page 2? Isn't that elementary?

Mr. MEYER. Well, I do not consider myself an expert on legal phraseology. As I said, I am not a lawyer, and while I guided the principles in the drafting of the bill, I did not guide the technical phraseology to the same extent, by any means.

Mr. ESCH. I would call your attention to the last paragraph on page 3, and make the same inquiry with reference to agents, servants, or officers, as to whether that isn't elementary and need not be included?

Mr. MEYER (reading):

Whenever by this act any duty is imposed upon any person, it shall be deemed to be imposed as well upon all agents, servants, or officers of such person, in so far as it shall be within the scope of their respective functions.

Well, I would say the same with respect to that. It is a matter of language and not of principles.

Mr. ESCH. Then in the definition H, page 3, "within the boundaries of the United States" means all lands and waters subject for any purposes to the jurisdiction of the United States of America.

That would include territories which are not within the boundaries of the United States. It looks like a definition by law that white shall be black.

Now, on page 4, section 2, you say: "That the President is hereby authorized and empowered, within the limits of the amounts herein authorized, or that may hereafter be authorized." In section 9 of the bill you make a direct appropriation.

Mr. MEYER. What is the first section you refer to?

Mr. ESCH. Section 2, at the top of page 4. You say: "That the President is hereby authorized and empowered, within the limits of the amounts herein authorized, or that may hereafter be authorized."

Mr. MEYER. Yes.

Mr. ESCH. Why not say "appropriated"?

Mr. MEYER. Well, that is again a matter of phraseology.

The CHAIRMAN. I think I can explain that if you will allow me to break in there. I have been consulted about this legislation for about two months, and before Congress took its recess, and there was some suggestion made to me that possibly the Appropriations Committee might make a fight upon the bill if we made a direct appropriation. Believing that the Appropriations Committee would be willing to include any authority made by this committee, I suggested myself, in order to avoid the possibility of a fight, that they authorize, that they do not make a direct appropriation. Then, afterwards, after recess, we came back here and then I suggested that we go along and make that appropriation.

Mr. ESCH. Section 9 makes an appropriation.

The CHAIRMAN. Yes. I am the one that is at fault, if there is any fault.

Mr. ESCH. You know, Judge, that this committee has not the power of appropriation except in two instances; that is, for the Lighthouse Service and for the Coast Guard Service.

The CHAIRMAN. Well, I put that in—I mean I suggested that it be done that way, and in redrafting the bill that was put in, but I am the one that was responsible for it, and for that reason only is it in there.

Mr. ESCH. On page 5, line 4, Mr. Meyer, you use the words, "and of the community served by such lessee." Why don't you use the word "operator," because your definition of the word operator means the owner, lessee, or other person. You have the definition, why hadn't you better adhere to that?

Mr. MEYER. Well, I would like to consider that.

Mr. ESCH. All right. I am just throwing these out as we go along.

Mr. MEYER. I am very glad to have the suggestions, of course, and if possible to give any reasons which may not be apparent for the use of the language.

The CHAIRMAN. I will state further, Mr. Esch, I suppose we will have the gentleman who drew this bill before us.

Mr. MEYER. I would like very much to have him. He will explain all questions of phraseology.

Mr. ESCH. Well, in that case we will wait for him.

The CHAIRMAN. He happens to be out of the city just now. Mr. Gans drew the bill.

Mr. ESCH. All right; I will desist this line of questioning now, then.

As to the matter of policy, then, if you will turn to page 7, subsection 6, at the top of the page, where it reads:

To maintain, operate, and extend any plant, pipe, or other transmission line, or other structure, facility, or appliance which he shall have constructed or acquired pursuant to the provisions of this act, and to deliver the power generated, and the products produced in any such plant to such persons and in such proportions, and at such times and at such rates as he may deem proper.

As a matter of policy, what effect would that have upon private power plants not taken over in the competitive field?

Mr. MEYER. Well, if the President acquires a plant, or constructs a plant, and delivers the power under the plant which he controls, either by construction or acquisition, as defined in the act, this gives him the power to fix the compensation. I think that necessarily follows logically, that if the United States Government commandeers a plant it distributes the product and fixes the compensation for that part of the plant or that part of the property which it has under its direct control.

Mr. ESCH. Yes; but I had more reference, more particular reference, to the fixing of the rates for such power as against a plant in the same community which is not taken over by the Government.

Mr. MEYER. Well, it would presumably be guided—the administration would have to be guided in its policy by the circumstances and the place. It will not ordinarily acquire a plant in the sense of commandeering it unless it is a peculiar situation. If it constructs a plant it will use a large part of the power for United States Government purposes. Since the power will be consumed either by its own agents or by contractors working under contract with the Government principally, it will be entirely proper and practicable for the Government to fix the rates. As a matter of fact, it will be probably paying the rates itself to a great extent in those instances.

Mr. ESCH. You have the idea, then, that that power given the Government to fix the rates would not seriously menace the private power plant?

Mr. MEYER. I think not at all, because in the first place these plants acquired by the Government or constructed will average a higher cost than the so-called private, but really semi-public, corporations, and a fair return on its capital would undoubtedly protect the public-service corporations in the community.

Mr. ESCH. At the top of page 9—

Mr. HAMILTON (interposing). I was going to ask Mr. Esch before he passed from that if I might interject a question there.

Mr. ESCH. Certainly.

Mr. HAMILTON. Suppose the Government raises the rate for its own purpose, assuming that there is a larger investment, making an increased rate necessary, does it follow, taking into consideration the important quality of human nature, that other corporations engaged in like business will immediately raise their rates, whether it is necessary or not?

Mr. MEYER. Most of these rates are governed by contracts, franchises, or public regulatory bodies.

Mr. ESCH. Yes; but this gives the President the power to impose a rate which might be wholly different from the rate imposed by the public utilities commission of that district or State. You get a conflict there. That is the thought I had in mind.

Mr. MEYER. Well, it is possible, and it will be in the very nature of the situation, that where the United States Government is in possession of the property, spending money and making advances, it will regulate its own property and regulate the compensation it charges for the property. But it would be a matter of administration to administer the interests of the Government with due regard to the local interests, and fully protecting both, to the extent that it is possible. The difficulty lies in the nature of the situation, that this is a Federal need, and that ordinarily the public-service corporation is a local need. Therefore, there is necessarily, in the very nature of things, some conflict. Personally, I do not think this can be entirely eliminated. The Federal Government will certainly not pass its property over to be governed entirely by the local community or public-service commissions.

On the other hand, a wise administration of this act would not lead to any abuses locally.

Mr. ESCH. Of course that Government plant might furnish the power for street car lines, or the lighting of a city, and the regulation of such rates would be within the domain of the State and not the Federal authority. They might raise some constitutional point there.

Mr. MEYER. Well, gentlemen, this bill contemplates supplying a deficiency for military purposes primarily. The United States Government will not build plants to light cities nor operate street-car lines.

Mr. ESCH. Well, it was stated here repeatedly that these plants would be serving so many different purposes that it would be hard to segregate the power used for the Government as against that which might be used for civilian purposes.

Mr. MEYER. As industry is converted more and more from the ordinary uses, a larger percentage of the entire industry, and therefore of the entire consumption of power, will necessarily go for military purposes. In Baltimore, where I had occasion to investigate the distribution of power of the Baltimore Power Co. nine months ago, in order to find out their position with regard to coal, I found that 83 per cent of the power distributed by the Consolidated Gas, Electric Light & Power Co. of Baltimore went to what would be considered strictly military and essential requirements. Now, you

may say that that isn't a wide distribution of requirement, but it is. There was a copper refinery using a very large amount; the Baltimore & Ohio Railroad, going through this city, using another large amount; the hoisting apparatus and the unloading and loading apparatus on the docks was operated by that power company; the Maryland Steel Plant got its power from that company; five chemical companies engaged in war work got their power from it; the Bartlett & Hayward Co., among the largest munition makers of the country, got their power from that plant; four or five shipbuilding concerns, fertilizer companies, the Liquid Air Products Co., and several other steel companies besides the one I have mentioned got their power from it. Now, that is all military requirements, but a wide diversification, covering Army requirements, Fleet Corporation requirements, and Navy requirements, and transportation requirements, without going into the general distribution of power for public consumption.

Of course the large proportion in number of consumers of power will be householders and small shop people, with a little power here or there which might be called unessential, but if you cull it all over you would not have saved a very large amount of power and you would have done an enormous amount of harm in upsetting a lot of little people who can't easily readjust their lives to the emergency.

Mr. HAMILTON. Mr. Meyer, I was going to inquire whether you could look over the bill—and you have leave to revise your statement here—and add such suggestions as may occur to you on examining the bill in conjunction, say, with the gentlemen who drew it, and add such suggestions as may occur to you by way of amendments to the bill as it is now written. Could you do that?

Mr. MEYER. I will be very glad to put in more time on the bill. We have spent a great deal of time working it into what we thought would be satisfactory form. On the phraseology suggestions I will be very glad to go over that with Mr. Gans, who did the drafting. I will be very glad, indeed, to give any point most careful study.

Mr. HAMILTON. I would suggest that inasmuch as you were directing the bill in relation to principles involved that it would be entirely appropriate that you, acting in conjunction with the gentlemen who drew the bill, to make such suggestions as you might wish to make to the committee in the way of essential amendments that might occur to you.

Now, I have one or two questions. I want to ask you to what extent the Government is engaged in the production, directly, of war necessities outside of shipbuilding, if you know?

Mr. MEYER. To what percentage?

Mr. HAMILTON. To what extent. In other words, what is the Government producing directly itself, if anything?

Mr. MEYER. Well, that is a comprehensive question.

Mr. HAMILTON. Well, broadly speaking.

Mr. MEYER. In the War Industries Board they may have that information, but I have been out of that board for several months, and I wouldn't like to answer that without making a careful survey. Direct Government operation would give you one figure, but indirectly most of the industry of the country is gradually getting converted to necessary war work.



Mr. HAMILTON. I meant by this question to inquire to what extent the Government itself is engaged in the production and manufacture of war necessities, if you have any information bearing upon that.

Mr. MEYER. Well, that information would be lodged in the departments, the Navy Department, the War Department, and the Emergency Fleet, principally, and it would take a very considerable time to make a survey.

Mr. HAMILTON. For instance, is the Government itself manufacturing gunpowder?

Mr. MEYER. It is.

Mr. HAMILTON. Now, would it be consistent with public policy to state to what extent?

Mr. MEYER. Well, I do not know. That is a matter on which the Ordnance Department can give you information.

Mr. HAMILTON. Well, that illustrates the line that I wanted information about. You are not in a position to give the information?

Mr. MEYER. No, sir; I am no longer in the War Industries Board and am not posted, and things move so rapidly that I should not like to give any information unless it was up to date.

Mr. HAMILTON. Precisely. They do move rapidly. This money will be applied, I judge from the testimony hertofore given, pretty largely in what is known as congested districts, and these congested districts are along the Atlantic seaboard, in the vicinity of the Atlantic seaboard and north of the Norfolk district, if I understand it correctly.

Lieut. STANLEY. The so-called congested district is in that section now. It is called the congested district, but there are other districts congested for power, or so far as power is concerned, all over the country, and it is not the purpose or the expectation that the money would be limited to that portion of the country by any means.

Mr. HAMILTON. Not limited, but pretty largely invested there. Isn't that true?

Lieut. STANLEY. I think that about \$50,000,000 or \$60,000,000 is the figure that we had up to date found to be necessary to be spent in that district. I can check that figure in a couple of minutes.

Mr. HAMILTON. Very well.

Mr. MEYER. Probably I should say that the additions to plant are not out of proportion to the existing proportions of existing plants. Would they be, Mr. Stanley?

Lieut. STANLEY. I should think not.

Mr. HAMILTON. While Lieut. Stanley is looking that up, if the Government makes a considerable investment—let us call it an investment—thereby increasing facilities for production in a given area of this country; lying outside of that is a vast area, it gives that particular area or those particular areas of the country a first mortgage upon increased production after the war, does it not? If I make myself clear?

Mr. MEYER. Well, that is a way of putting it.

Mr. HAMILTON. Well, that is practically true, isn't it?

Mr. MEYER. Power is an essential of production. If it is economically advantageous to produce, then having the power there will facilitate it. Putting the power there now will not give any advantage, so far as I can see it, to that local community over the rest

of the communities of the country, which it would not have within a short period after the war, because of its ability to provide its power on ordinary terms of financing. The term of "helping" these companies, gentlemen, is very misleading. The bill is to get these companies to help the United States Government.

Mr. HAMILTON. We appreciate that.

Mr. MEYER. And this is no measure to help any companies. It is a measure to help the Government get its power. I would like to emphasize that very strongly.

Mr. HAMILTON. We don't understand that you are trying to help companies. I am simply trying to consider the ultimate effect, which I say we should consider. Of course it would seem to me now—I may be in error—that if the Government goes into a large investment and increases facilities for production very largely in a certain area, those facilities for production being there already erected and in operation, that the industries engaged in this production, these lines of production, would have a certain advantage after you return to peace footing, and I had in mind not any particular locality, but the question of judicious and fair distribution, not having in mind either any effort to have the Government distribute this increased power for the benefit of any industries anywhere particularly, but simply trying to consider the ultimate effect of it. However, I will simply state that I will not pursue this line of inquiry further now.

One other inquiry, and that relates to the subject, too—a burning question, so to speak—this plan involves a considerable increase in the use of fuel. does it not?

Mr. MEYER. Yes; you can't get power without fuel.

Mr. HAMILTON. Precisely. Are you in such close communication with the Fuel Administration as to see to it, to some extent at least, that the people of the country at large are very greatly troubled already about their fuel for next winter? Are they still further to be interfered with? This fuel distribution question is giving all of us in the North a great deal of concern.

Mr. MEYER. This power construction work that is contemplated in this bill will be more of a matter of interest to householders in the following winter than in this next winter.

Mr. HAMILTON. You don't expect to get this in operation now then?

Mr. MEYER. It will be impossible to do any considerable part of this program inside of a year or 18 months.

Mr. HAMILTON. You will have to do something with relation to the assembling of these Eagle boats.

Mr. MEYER. Oh, yes. Well, that is, of course, a very small item compared to this entire program. I think they expect to take a little surplus power from New York over to Newark to help in the Eagle boats. That wasn't cited as a case where there would be a heavy power consumption, but as a case where it was necessary to locate a plant in a congested district, in spite of the fact that there was evident desire not to do so. That is merely an illustration of the impossibility of always avoiding that.

Mr. HAMILTON. I cited that as an illustration of immediate need, and I suppose there are others.

Mr. MEYER. There is no plant construction involved there.

Mr. HAMILTON. Yes; I understood that. I don't know that there is anything further that your board can do in relation to this matter of coal, but it is, as I say, a very serious question with a great many people who are likely to go cold during the coming winter.

Mr. MEYER. Well, of course, that whole question is under the Fuel Administrator.

Mr. HAMILTON. Of course, I don't wish to make any comment on the administration of the fuel question in this connection.

That is all I have to say.

Mr. DEWALT. I understand, Mr. Meyer, that you had supervision of the drafting of this bill.

Mr. MEYER. Yes, sir.

Mr. DEWALT. I don't find any provision in it reserving the rights of the different States as to taxing these utility corporations, do you?

Mr. MEYER. Well, have the States the right to tax Federal property?

Mr. DEWALT. No.

Mr. MEYER. As long as the title is vested in the United States Government I assume that the States would not be able to tax it. When it becomes the property of the company under any arrangement with the United States Government or otherwise, I presume it would again come under the taxing power of the State.

Mr. DEWALT. That is evading the question. While Federal property of a certain character is not liable for State taxation, when the Federal authority takes over property which lies within the confines of the State, to wit, a railroad or a pipe line or a power plant, that does not, ipso facto, deprive the State of the right to tax. The right of the State to tax still remains with the State, so far as all these railroad corporations are concerned which have been taken over by the Government. The right of the State to tax would still remain as to these pipe lines which you speak of in your bill. Now, there is no provision in this bill that I can find reserving the right of the States to tax, I call to your attention.

Mr. MEYER. I will be very glad to take that up.

Mr. DEWALT. Now, supposing you look at page 10, section 4:

That whenever any act done pursuant to the provisions of this act shall constitute a taking of private property within the meaning the Constitution, just compensation shall be made therefor in an amount to be determined by the President.

and so forth.

In this bill you have incorporated the power to annul and cancel, to abrogate all private contracts between the utility corporations and the cities. Was it your thought, or the thought of your attorney, that the annulling of these private contracts, the abrogation thereof or the cancellation thereof, was covered by that section? And permit me to say in that connection that when you annul my contract which I have with the Electric Supply Co. you are, in fact, taking my property, and you must pay me for it, because you can't take property and condemn the same unless you give me due compensation. Now, will you be kind enough to refer that to your attorney and see as to whether the phraseology there is broad enough to cover compensation for the annulment and abrogation of private contracts? Personally, I do not think it is, but my judgment may be at fault.

Mr. MEYER. Well, you know private contracts have been annulled very freely on the ground of military necessity.

Mr. DEWALT. There is no question about the power.

Mr. MEYER. During the war.

Mr. DEWALT. There is no question about the power. That is all right. The question is about the compensation.

Mr. MEYER. I will be very glad to take that up, sir.

Mr. DEWALT. Now, on page 8, subsection 10, you say:

In furtherance of any of the foregoing purposes, to acquire any property or property rights, including any public or private rights, that the President may take over.

You don't say "the President," but the authority is to take over any processes, patented or otherwise. Now, query: The life of a patent is 17 years, with the right of extension for improvement from time to time. Will you ask your attorney as to whether or not there is any provision in the bill there looking toward compensation for the use of that patent right consonant possibly with the idea which is in the alien enemy act, where the United States Government takes over even a foreign patent of an alien enemy the use thereof shall be had by the Government, but certain royalties shall be held in abeyance and afterwards paid off. Perhaps that might be worthy of consideration.

Mr. MEYER. I will be very glad to take up those points, and I think Mr. Gans, who drafted the bill, will be competent to pass upon them.

Mr. DEWALT. Understand, Mr. Meyer, this is not in the way of criticism at all, but only in the way of trying to perfect the method if there is fault in it. I don't say there is.

Now let me turn to page 6, subdivision 5: "To construct any pipe or other transmission lines." When you say pipe line did you have in contemplation these oil-pipe lines, Standard Oil pipe lines?

Mr. MEYER. We were not contemplating going into the pipe-line industry, but it may be necessary to transport oil or gas by pipes incidentally to the generation of power.

Mr. DEWALT. Well, but you speak here of "pipe or other transmission lines."

Mr. MEYER. Yes.

Mr. DEWALT (reading):

Or other structures, facilities, or appliances that he may deem necessary or useful for the purpose of better utilizing or of increasing the facilities of any power plant, or of combining the facilities or power of two or more such plants, or of better utilizing the gas, power, or products generated by them.

Now, the phraseology of that, in my judgment, would be broad enough to take into contemplation at least the taking over and the combining of various competing pipe lines for the transmission of gas. We have very large gas fields in Ohio, Indiana, Kentucky, Pennsylvania, and the query in my mind is, Did you contemplate taking over these gas lines?

Mr. MEYER. We contemplated the power to do it. This provides for powers that may be used or may not be used, depending on circumstances, but the power to do it places the Government in a position to accomplish its military purpose, and it is hoped that it will protect the Government's position and be fair to the industrial end.

Mr. DEWALT. Now, on page 3, subdivision G, I suppose you, as the supervisor of the drafting of the bill, intended to make the

provisions of this bill stronger than even the railroad bill, did you not?

Mr. MEYER. Well, I am not familiar with the legal details of the railroad bill.

Mr. DEWALT. You say here: The time to acquire' means to purchase, requisition, condemn, or take over the title to, or to lease, requisition, condemn, or take over the right to use, occupy, or operate." Now, isn't that broader and more drastic in its terms than any legislation that we have yet had in reference to the use of private property for Government purposes?

Mr. MEYER. It is strong, and was intended to be a very broad power, but I may say this, that there was no intention to make easy an abuse of power, and all these provisions have been carefully discussed with representatives of all points of view—I mean the power companies themselves and the representatives and officers of the national association of electric light and power people; and of course they recognize that it does place in the hands of the President a very great power. They have confidence in the fair use of that power for military purposes, as it is intended in the bill. The companies themselves, in frank and open discussion, approve of these provisions, recognizing them as a military necessity, which is the basic point of view of the whole bill.

Mr. DEWALT. On page 2, subdivision E:

The term "property" includes real and personal property of every nature and description, together with any right, interest, or easement therein or appurtenant thereto.

What was in your mind when you said "easement"?

Mr. MEYER. Well, that refers to the phraseology of the bill, and I would like to have that answered by Mr. Gans, the attorney who drafted it.

Mr. DEWALT. Will Mr. Gans be here? He is out of the city now.

Mr. MEYER. We will get him here for you. He has gone away on a short vacation.

Mr. DEWALT. I wish you would call his attention to that.

Mr. MEYER. I will, with pleasure.

Mr. DEWALT. For instance, here is something that might be called to his attention if you see him before he comes in here: The word "easement" in law applies to a great many things. It might be a right of way. I will give you an instance which I have in mind. The Delaware River is declared a navigable stream. The Lehigh River is declared to be a navigable stream, although I don't suppose anything larger than a rowboat could ever get up it. Now, by the power vested in the legislature of the State of Pennsylvania they have granted the Lehigh Coal & Navigation Co. the right in perpetuity of the use of the waters of the Lehigh River for canal purposes. Now, the Lehigh Coal & Navigation Co., the Lehigh Co., the Horton Co., which has been spoken of here, are interallied and connected, as Mr. Stanley possibly may know, by the provisions of this bill and by the incorporation of the word "easement," and it would become possible—I don't say probable, but at least possible—for the United States Government to condemn, acquire, and take into possession the whole of that water power running from Mauchunk all the way down east. Now, if that is the intent of the drafter of this bill by including the word "easement," I think it would be of sufficient importance to let us know about that.

**Mr. MEYER.** I will be very glad to refer that point to him.

**Mr. DEWALT.** And, understand me again, I do not submit this as a matter of criticism at all. The bill may be all right, but I would like to know how far it goes and what the contemplation of the drafter is.

There is one thing more. On page 12, section 8, referring to that specific section, I understood you to say—I may be mistaken—that when you drafted this bill you attempted in every way to prevent legislation looking either toward the advancement or retardation of public ownership of private utilities or public utilities. That statement is correct, is it not?

**Mr. MEYER.** Yes, sir; that was the attitude.

**Mr. DEWALT.** Now, with specific reference to section 8 you say:

That the President may retain any property and operate any plants, transmission lines, structures, facilities, or appliances constructed or acquired under the provisions of this act for such time as he may deem necessary or advisable for the purpose of selling or otherwise disposing thereof.

Query: Wouldn't that leave in the hands of the President an unlimited power to retain any of these plants, transmission lines, or structures indefinitely, and thus almost inevitably lead to public ownership of these facilities? He has the right to determine whether he will sell, how he will sell, at his own sweet will. Secretary Baker said he was not against public ownership of such utilities. Now, some people differ with him.

**Mr. MEYER.** We have tried to straddle and not take sides.

**Mr. DEWALT.** Well, aren't your legs pretty far apart when you straddle here? (Laughter.)

**Mr. MEYER.** I don't think so. We thought the clause "for the purpose of selling or otherwise disposing thereof" showed an intention that it was to be disposed of and to be sold, but it was intended to remove from the President the necessity of disposing of it at a particular time, which might be very disadvantageous to the Government's interests. If we should say that it had to be sold at a specific short period subsequent to the war, it might be extremely damaging to the values that the United States Government had invested in it, and reasonable leeway should be given.

**Mr. ESCH.** In another section of the bill you put in a five-year period. Why shouldn't it be in here? That gives you five years in which the Government and the President are to dispose of the property.

The **CHAIRMAN.** This says "sufficient time" to dispose of it. It might be less than five years.

**Mr. DEWALT.** Just as Mr. Esch says, here in another provision of the bill, looking toward what you might call recapture, a five-year period is the termination. Now, in this particular provision they make no limitation at all. That might be at least the limit.

The **CHAIRMAN.** I want to ask, in all fairness, if the limitation under time in which to dispose, sell, or otherwise dispose of, is not in common sense and fairness a limitation for that purpose, and nobody could think that perpetual ownership could be established under such an authority as that?

**Mr. DEWALT.** Well, I would like to argue it out with you sometime in private.

The CHAIRMAN. Well, I will be glad to do it any time in private. I don't want to take up the time now, but I think that is the fair, reasonable construction.

Mr. DEWALT. That is the reason I don't want to argue it now. It takes too much time.

The CHAIRMAN. The purpose is to sell or dispose of, not permanent ownership or operation.

Mr. MEYER. The question of the after-war conditions is so indeterminate that I think too short a period may jeopardize the Government's interests. A certain amount of leeway should lie within the discretion of the President. There is a question of post-war conditions, as was brought out by one of the gentlemen who has left in the meantime. I think it will depend entirely on who wins the war and who dictates the terms of peace; and also on how we handle our post-war problems—the reconstruction period; the transfer from what we now consider essential from a military point of view to what will become essential from an economic point of view. The wisdom and foresight and care with which that period is handled will determine in part whether or not these plants will have value greater or less. So that there may be an acute period after the war when for a few months or one or two years the situation may be difficult, the volume of production may shrink. The analogy of the post-Civil War period means very little to me, because prices were upon a greenback basis at that time. We are trying to keep prices on a gold basis now, and the currency price was so much of a factor after the Civil War that I think it is no precedent. The theories will differ with almost everybody who studies the subject. Personally, I feel that the country's industrial resources in this war are more wholly locked up in the war activity, and that a relaxation of this enormous activity can not be supplanted with ease and promptness by peace activities. There will be a period of difficult readjustment. The proper handling of public works which are being suspended and stopped at present may be the solution for the evolution from a war industrial to a peace industrial basis. These power plants may be not as fully used if we do not accomplish that transition carefully and smoothly, as will be the case otherwise. Of course, who wins the war is going to be an all important factor.

Mr. DEWALT. Mr. Chairman, may I ask Mr. Stanley a question?

The CHAIRMAN. Certainly.

Mr. DEWALT. Mr. Stanley, in your investigation did you determine the proportionate cost between the power generated by steam and the power generated by electricity at, we will say, a point of 100 miles distant from the electric plants, per horsepower?

Lieut. W. W. STANLEY. I don't believe the difference between power generated by steam and, as you said, power generated by electricity—did you mean water power?

Mr. DEWALT. No; I have particular reference now to plants that derive their fuel from the mines. For instance, take a plant that you and I have in mind. Now, that is located right in the anthracite region. It furnishes power for a distance of at least 135 or 140 miles—it may be farther. Its lines run from Horton way over into New Jersey. Now, in your investigation did you have any means of ascertaining what the approximate or proportionate cost per horsepower between the powers generated, we will say, in eastern Pennsylvania, which is

about 100 miles away, by steam? That is, the use of fuel there and the cost of that same power per horsepower as derived from the electric plant? Do I make myself clear?

Lieut. STANLEY. If I understand it, it is the cost between generating power at the mine's mouth and transmitting it 100 miles?

Mr. DEWALT. Yes; and generating it at a point 100 miles from the mine mouth, without any considerable transmission. Here is a concrete instance. I have a shoe factory in eastern Pennsylvania, we will say. That shoe factory is located 100 miles away from Horton. I am now getting my power by using coal; that is, consuming it there, generating my power, using the steam. I propose to electrify my plants and put in this Horton power. Have you ascertained the difference in cost between the two? Because your proposition looks toward the generation of 1,200,000 horsepower additional, does it not?

Lieut. STANLEY. Something like that.

Mr. DEWALT. In the whole country?

Lieut. STANLEY. Yes, sir.

Mr. DEWALT. Now, if I can find out how much we can pay per horsepower, approximately, it might be a very substantial thing to present here.

Lieut. STANLEY. I don't believe you can give that answer definitely for any except a particular situation, because the conditions of load, that is the kind of factory that uses the power would be a feature that would enter into it quite seriously. Specifically we have considered the possibility of generating at the coal fields in Pennsylvania, near Horton, and transmitting the power both toward and into New Jersey and down to Philadelphia. I don't think Horton now feeds New Jersey. It goes close to the border line but I don't think it goes over. The success of an undertaking to do that depends on transmitting a very large amount of power at very high voltage, and with good load factor, that is, a fairly continuous use of power at the other end. It is a problem, as you probably know, that has been discussed between the companies in New Jersey and Philadelphia and Pittsburgh for a number of years. I think it will come sometime. I think it may come during the war, if it is necessary to very greatly increase the New Jersey and Philadelphia use of power. It is not a very quick solution, which is unfortunate.

Mr. DEWALT. Right in that connection, Mr. Meyer, would you think it wise to suggest to your counsel, who drew this bill, that the rates of charge for this power which is to be furnished at least partially under Government control, should be under the supervision of the Interstate Commerce Commission?

Mr. MEYER. Should be under the supervision of the Interstate Commerce Commission?

Mr. DEWALT. Yes. We are going into this business, apparently, and private corporations will want this power. Now, railroad rates have been fixed by the President, with the added proviso, I believe, that the Interstate Commerce Commission is to have some sort of advice or supervision over it. Now, the query is, wouldn't that be a suggestion which might be incorporated here?

Mr. MEYER. I will be very glad to consider that. The intent of the bill being the temporary lodgment of this power in the Federal control, with a view to allowing it to pass back to local control, it seems to me that regulation under the administrator rather than



under a permanent government body would be more logical. But I should be very glad to take that up and give it study in connection with Mr. Gans and everybody else interested.

Mr. DEWALT. The same thing applies to railroads. They say it is not the intention to keep the railroads permanently.

Mr. MEYER. The railroad rates have been under Federal control for a long time.

Mr. WINSLOW. I would like to ask two or three questions, following along the line of the inquiries of Mr. Esch and Mr. Dewalt a little farther. I don't know that you really can answer these questions definitely, but I would like to find out.

Have you considered on what basis the Government should sell its power?

Mr. MEYER. No, sir; that will be a matter for separate consideration in each instance, governed by the local conditions.

Mr. WINSLOW. Well then, take it within a given territory and come right down within a unit of territory. How then would they sell this power?

Mr. MEYER. It would depend to whom it was being sold and for what purposes. I think it is wisely left to the discretion of the President under this bill, because conditions and circumstances will vary so greatly, depending on who is consuming the current, what contractors or what Government departments. If there is a surplus it may be necessary to charge a little higher price for the power delivered until the larger proportion of the capacity of the plant is consumed. Of course, I think they will all be loaded full from the very beginning, but it may happen otherwise.

Mr. WINSLOW. I am not interested so much with the exception as I was with the normal run of charge.

Mr. MEYER. It is a highly technical question and each case will be governed by local conditions. Do you agree with that, Mr. Stanley?

Lieut. STANLEY. It would depend, sir, very much on the price of coal, the kind of units and the size of units that were installed.

Mr. WINSLOW. No; you haven't got me. I don't want to waste time on this, because I appreciate what you say. Does the Government intend to run its plants in competition with privately owned plants?

Mr. MEYER. There again it would be within the discretion of the President under the bill to determine the terms.

Mr. WINSLOW. The limit of possibilities of everybody is up to the President.

Mr. MEYER. I should assume that the Government would get a fair return on its money advanced and invested while it is invested.

Mr. WINSLOW. Shouldn't there be some information given to this committee based on rather more than your assumption—a pretty definite idea?

Mr. MEYER. Different conditions are contemplated in the bill. You see there is a provision by which the Government can write off as war waste a considerable part of the cost. Not only would it get no return on the investment in the way of profit or interest but it would actually make a contribution out of the war waste, so it would be a loss. The case of a possible loss is directly contemplated, and let me say that in my opinion the clear setting forth of this fact in this bill is one of the favorable factors, because it attempts to determine

that question with clearness. All other ways which have been suggested—and a good many have come up to my notice, through proposed contracts from some department in a small power situation or in a large situation—every other way that has been contemplated through department contracts involves a much less careful preservation of the Government's interests than is possible in this bill.

Mr. WINSLOW. I am not looking to the Government in this case; I am looking out for the other fellow. It is our business to legislate not only for the Government but for the people, individually as well as collectively, and now, then, supposing you go into a city which we will call M, and there is a power plant now selling its power under contract and under restrictions of the State in which the power is being furnished. Now, we will say that I am a manufacturer A, and your local power plant is power plant X. I have a contract, as have many others, with that power plant for power. The people of the community own the securities of that power plant X. Now, if the Government should go in, disregarding the charge off, disregarding their profit, it might easily be that they would turn out power and charge it at a less amount than I am paying that company now for the power I am getting, which would render the task of the power company X rather difficult.

Now, let us go further. Suppose that I as manufacturer A am buying a thousand horsepower under contract from the power company X, for which I am paying \$1 per unit of power. What would be the attitude of the Government in respect to the charge to me for another thousand horsepower, it being understood and known that the 2,000 are all going to be put into the manufacture of shells? Now, how will they meet that basis of charge and how would the Government have its way of making the charge?

Mr. MEYER. I would like to answer as intelligently as I may, but I can not anticipate the administration of this bill.

Mr. WINSLOW. But we have got to look forward a little bit.

Mr. MEYER. I will just point out this: The very fact that the Government does desire within reason to protect its own investment is the guarantee of the protection of the investment of the local power corporation.

Mr. WINSLOW. It is very fine if it works out, but if the Government decided, "We are going to make this at cost and are going to hand it out at cost," there would be the trouble. If, on the other hand, the Government should find that the power costs more than the local company by virtue of the cost of installation, etc., pays, then are you going to charge the community more for their power or are you going to sell below cost in order to reach community rates?

Mr. MEYER. Well, as I said, I can not anticipate the administration of the act, but I see no evidence from the administration of the War Finance Corporation, which has most to do with public utilities, that the President's nominee would use Government money to make a present to the community through low prices for power or otherwise. The usual reasonable rates have been charged for the use of money, one of the costs of the installation. Now, there is no reason to anticipate an extreme attitude on the part of the power administrator under this bill, or whoever would administer it for the President.

Even taking it with a strong desire to protect the local interests of corporations, I see nothing to fear from that point of view. I think it is still in the future what the effect would be, but I wouldn't see anything revolutionary or disastrous as being among the possibilities. The way in which a local power company acquires a plant or investments made by the Government is provided by arbitration. Later on, what the Government plant acquired by the private corporation costs the corporation will be more of a factor. Of course, whatever it is it will have to be borne by the local community. It is going to be judged on a basis of arbitration, presumably, and then it will help to form the basis of the rate in the community. Up to that time, or approximately that time, it will concern power mostly consumed by the Government through its contractors, so the rate won't be so much of a factor to the companies or the public. These plants are not to be built to create surplus power nor to compete with power plants already in existence. They are being built to supply deficiencies or to meet a need which is being anticipated, and which must be counted upon, of course, very largely. I believe that the needs will be greater than the contemplated supply.

Mr. WINSLOW. Now, suppose I am manufacturer A, and this gentleman here is manufacturer B, and I start in to make shells, because I am desired to make shells, and I buy my power at the established rate through the Government section at a dollar a unit. Now, this gentleman has been in the business. He has a contract with the local company for \$1.25 a unit, and we are both making the same article. I can't compete with him on an even basis, because of the difference in the rate of power. There will be a discrimination on the part of the Government in favor of a new man coming into the business at the expense of the old one. Now, how will you adjust that?

Mr. MEYER. I don't think the Government would go in and sell power below the prevailing rate.

Mr. WINSLOW. Well, now, would you have any objection to embodying that in the bill?

Mr. MEYER. I think that it is wise, so far as I can see, to avoid these manifold specific restrictions. I think it is so fair a presumption that I hesitate to advocate introducing detailed limitations. I believe that in these emergency powers free scope should be lodged with the administration, and responsibility for the bill and the administration attained in that way. It will be impossible to foresee any and every contingency and eventuality that will arise. I think, from my observation of the war work in the last year and a half, that the freer from specific restrictions—always admitting, of course, that Congress does wisely restrict in many cases the exercise of arbitrary power—I have seen more harm come from detailed restrictions than benefit and therefore, while I would not like to say that I object to this or that provision, I feel that, unless it is a matter of considerable importance, it is well to leave it in the general grant of power.

I am not afraid, personally, of the unfair or dangerous administration of this power, and I feel that way, because, going back into the history of the formation of this bill, which I will take the liberty of referring to again, almost every possible view has been consulted in connection with the framing of this bill. The companies and their counsel, and the national association, Mr. McCall, for instance, of

Philadelphia, who sat there, and the public service commissioners of his State, who have fought him for many years, sat down and agreed upon this bill together. It has an unusual history, perhaps, in the way of legislation from that point of view, and the object of obtaining that cooperation was that we might meet every possible objection that can be thought of in advance, and remove the difficulties that attend this kind of legislation in general, to the extent that it is possible.

Mr. WINSLOW. You are at the head of the War Finance Corporation?

Mr. MEYER. I am one of the directors.

Mr. WINSLOW. Do you happen to know of any channel through which a producer or manufacturer who has suffered loss at the hands of the Government in his operations has any means of getting redress without going to the Court of Claims.

Mr. MEYER. I do not specifically know where a man can get legal redress.

Mr. WINSLOW. Well, practical redress.

Mr. MEYER. Practically the War Industries Board has a section which is intended to facilitate the placing of contracts with industries whose business has been hampered through military necessities, either in one way or another, through lack of raw materials which had to be used in other directions, or for any other consideration. But while I don't know the specific legal procedure by which recovery can be obtained—and I don't believe there is any, and I don't believe it is practicable to assure that, because the revolutionizing of industry due to the war is something that is incidental to the war and can not in every case be compensated for—I feel that the War Industries Board has a very strong inclination and intention, and has actually done a great deal in many cases to help the industry turned from what is called unessential or less essential industry to war industry.

Mr. WINSLOW. Has the War Industries Board any power to reimburse damage which they admit?

Mr. MEYER. No, sir.

Mr. WINSLOW. Suppose a man makes a contract for a million dollars' worth of production, and after he has made a quarter of a million, if the Ordnance Department, to illustrate, finds an article that is better to use in place of the one they have contracted for, the Government can shut that man off at a quarter of a million and tell him to make no more, although he has laid his plans to cover a million.

Mr. MEYER. You refer to a cancellation of contract.

Mr. WINSLOW. Anything that is simply the fault of the Government. Now, then, when he has made that and can prove it—and the Government agents admit it—do you then know of any way in which that man can recover?

Mr. MEYER. In the case of a contract it would depend, of course, on the terms of the contract, and the adjustment would depend on the terms of the contract and the law governing the situation. I don't think there is any general agency for such adjustment.

Mr. WINSLOW. These war boards have the power to order, and they have power to make contracts?

Mr. MEYER. No; not the war industries. Each department makes its own contracts.

Mr. WINSLOW. Well it is too confusing for me to follow all those details.

Mr. MEYER. All the contracting is lodged in the specific department.

Mr. WINSLOW. Well, say it is so; suppose your War Finance Board has granted \$200,000 to a concern to build an article for the Ordnance Department, and you get your money in. They have bought machinery and they have become involved, have got out notes, etc., in addition to your \$200,000; and about the time they are getting started the Ordnance Department decides they don't want that article any more. They say, "we can get another article that we like better than that," and they say "stop," and of course this man endured loss and damage. Is there any way you know of by which he can collect that loss or damage without going to the Court of Claims?

Mr. MEYER. I have heard of cases of that kind where the loss is adjusted by the department which found it necessary to cancel a contract, recognizing that fairness under certain circumstances required that the contractor be recompensed.

Mr. WINSLOW. What departments have done that? I am looking for that case exactly.

Mr. MEYER. In what department has that happened?

Mr. WINSLOW. Yes.

Mr. MEYER. Well, I will have to think about that.

Mr. WINSLOW. I wish you would write me about that. I am glad to find that out. I have been looking for just such a case as that.

Mr. MEYER. I am quite sure that I have heard of cancellations of contracts and compensation adjusted, but it may have been that that compensation was provided for in the contract.

Mr. WINSLOW. Well, if it were, that would settle that point.

Mr. MEYER. But I often have seen cancellations made where the contractors accepted it in a spirit of patriotism and, adjusting themselves to the hardships of war, said, "Well, I will pocket the loss."

Mr. WINSLOW. That's all right; but if it wiped him out I don't know whether that is patriotism or not.

Mr. MEYER. I have heard of cases of that kind.

Mr. WINSLOW. Now, I had that in mind in reference to this case: If a competitor in a line of business in a town, by virtue of the rate for power should happen to find himself unable to carry on his business as he probably intended to carry it on, because the Government would sell to his competitor for less, we ought to provide for that, and we can foresee that.

Mr. MEYER. I am not at all afraid of it.

Mr. WINSLOW. Well, I am afraid of it, because I can produce this very case I am telling you about, and there is no way to get redress. They all say, "We are sorry for you and you are all right; but where will we get the money?" And the answer is the same thing, "I don't know." And it is about time for that to be changed, and I want you to consider that.

Mr. MEYER. I will be very glad to take it up.

Mr. WINSLOW. There is liable to be more trouble of that kind coming up.

Mr. SNOOK. This bill provides for two methods. One is by advancing to corporations already organized, or contemplated to be organized, money and allowing them to build plants. The other is

by taking over plants or the building of new plants which the Government, at least in many instances, is expecting to operate. Now, you say you have made an extensive study of the question with the people already engaged in this industry. Can you give any idea of how much of this money you expect to spend by advance to the people already in the industries, private corporations, and how much you expect the Government to spend by building, operating, and taking over?

Mr. MEYER. Since this matter was discussed with the industries there has been some little contracting by the Government departments by which some of these situations have been taken care of to a slight extent. As a principle I should say that I don't like to anticipate the administration of this bill, as I said before, or discuss the method that will be pursued by somebody who is intrusted with this responsibility. It would appear to me more advantageous, both for the companies, the community, and the Government, to make always, to the extent that is possible, a contract between the Government and a company, in order to make it in the form of an advance, rather than for the Government to build and operate a plant. That may happen where a power plant would be required away from a normal, ordinary power market. There may arise such instances, but where plants are to be supplied in addition to existing plants, I should think it would work out more advantageously to do it under an arrangement with the existing company for financing and operation and adjustment of valuation subsequent to the war.

Mr. SNOOK. When you talk with these people have you any idea of the comparative amount that will be expended this way?

Mr. MEYER. No.

Mr. SNOOK. Each way?

Mr. MEYER. No; because it will depend on the negotiations as to whether or not the Government will build its own plant and operate it, or whether terms satisfactory to the companies will be found. No negotiations can be conducted under a bill which hasn't been passed.

Mr. SNOOK. Have you had any considerable applications from concerns already in existence, operating plants, for advances of money, under the other plants?

Mr. MEYER. If there is a situation where if aid can be had power can be provided; applications are not made, because there is nobody to whom to apply.

Mr. SNOOK. But out of your present corporation?

Mr. MEYER. With the War Finance Corporation we have had some applications, but not important ones, because they know perfectly well that, as organized at present, the War Finance Corporation can not possibly furnish the financial assistance to do this thing. Legally we are prevented. They are not in a position to give the security that under the law we must require, so that they wouldn't apply to us. But that doesn't mean that the power is not needed and that the financing to provide the power is not equally necessary.

Mr. SNOOK. You have no means of knowing, then, or making an estimate of how much would be used in either event?

Mr. MEYER. No; it will depend on the negotiations.

Mr. SNOOK. Do you have any information on that subject?

Lieut. STANLEY. I would like to say this, but not for the record. (Lieut. Stanley's statement was not placed in the record.)

Mr. SNOOK. You don't know from the surveys you have made whether there will be applications on the part of companies already in existence to have this credit extended to them?

Mr. MEYER. Oh yes.

Lieut. STANLEY. Yes; there certainly will be.

The CHAIRMAN. Mr. Meyer, we are very much obliged to you for your appearance here. We will adjourn now until 11 o'clock to-morrow morning.

(Whereupon, at 1 p. m., the committee adjourned until 11 a. m. Tuesday, August 27, 1918.)

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COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
HOUSE OF REPRESENTATIVES,  
*Tuesday, August 27, 1918.*

The committee met at 11 o'clock a. m., Hon. Thetus W. Sims (chairman), presiding.

The CHAIRMAN. The committee will come to order.

Now, Mr. Cooke, you may go ahead and make your statement without interruption, and then the committee may want to ask you some questions. Please state your name and what connection you have with the Shipping Board or other war industries.

**STATEMENT OF MR. MORRIS L. COOKE, WASHINGTON REPRESENTATIVE OF THE EMERGENCY FLEET CORPORATION AND ASSISTANT TO THE CHAIRMAN OF THE SHIPPING BOARD.**

Mr. COOKE. My name is Morris L. Cooke, and I am the Washington representative of the Emergency Fleet Corporation and assistant to the chairman of the Shipping Board, handling power matters.

Mr. Hurley wanted me to say to you, Mr. Chairman, that immediately on his return to the city he would, of course, be at your service in case you want to supplement my statement in any way.

The CHAIRMAN. Unless he is going to return pretty soon, I hope it will not be necessary.

Mr. COOKE. The Emergency Fleet finds itself in a rather embarrassing situation. Power, of course, is as essential to the building of ships as the materials that go into them. Our appropriations are made in such a way that we have hesitated to advance moneys to utilities companies, except where there was an acute emergency.

As Mr. Meyer said yesterday, in making preparations for power one is almost inevitably talking 18 months ahead; that is, about something that is going to occur at least a year and usually 18 months ahead.

Realizing that at some of our shipyards there would be this emergency need for power—and, in fact, that it already exists—before Congress adjourned we went before the Appropriations Committee and asked for an emergency appropriation of \$20,000,000 to \$25,000,000 simply for power. The statement was made that the Appropriations Committee hesitated to make appropriations for power to any one department, because if they made it to one department it

would be called upon to make similar appropriations to other departments, and the feeling of the committee was that it should be handled in some broader way.

The intimation was given to us that if members of the Appropriations Committee were building ships, and they were up against an acute emergency, they would go ahead and provide power. But we have interpreted that to mean that in doing so we could take care of "war wastage," but very little more than that, without really getting into the domain of financing utility propositions, power propositions. We already have had acute power shortages at Chester, Pa., at Seattle, Wash., at Portland, Oreg., Norfolk, Va., Gloucester, N. J., Wilmington, S. C., and San Francisco, Cal. These are ports that I happen to have had personal acquaintance with, and, of course, we have had similar situations in a number of other shipyards.

Pending the passage of this bill—or rather pending Congress making known its wishes as to how it wants the administration to handle this power matter—the Secretary of War, the Secretary of the Navy, and the chairman of the Shipping Board, as the heads of the three operating departments which are principally at interest, have been cooperating to see how they could tide over this emergency situation. We have reached a sort of a working agreement that no one of us will make a contract for power without allowing the others to sit in and comment on the proposition, and, further, in order that we might get ahead, the War Department has assumed, you might call it, the leadership in the Pittsburgh district, the Navy Department in New Jersey, and the Shipping Board in the Philadelphia district. We use that term "district" because it includes in our case not only the city of Philadelphia, but reaches Chester, Pa., Wilmington, Del., and may ultimately cross the river into New Jersey.

Now the Philadelphia Electric Co. anticipates a shortage in Philadelphia this winter, this coming winter. In some respects you may say that there is a shortage now existing—not perhaps a shortage in the territory as a whole, but in one or more of the distribution districts. In the district in which the Midvale Steel Works are located, for instance, there is already an inability on the part of the company to supply power, and during this coming winter, unless we can take some effective action, there will be an acute shortage. But for the winter of 1919–20 the shortage—the estimated shortage—is all the way from 50,000 kilowatts to over 100,000 kilowatts.

Mr. ESCH. Won't you please reduce that to horsepower, because we have been using that as a standard all along?

Mr. COOKE. I can not do that offhand, Mr. Esch, but you can use those same figures for horsepower and they will be only a little less conservative than I am trying to make them.

The CHAIRMAN. Let me ask you, Mr. Cooke, if a kilowatt isn't equal to a horsepower and a third? That is about the nearest you can get to it.

Mr. COOKE. That is a good working approximation.

The CHAIRMAN. That is, that a kilowatt means what a horsepower and a third would mean, relatively, in comparison?

Mr. COOKE. Yes, sir; that is as good an approximation as you can make. I have purposely lopped off something on these estimates that I am giving you in order to be perfectly sure—in order to describe a condition that I am personally convinced is going to ensue.



Now, it was asked yesterday here what attitude the companies will be likely to assume under this proposed legislation. I suppose each of us has a right to speculate on that to suit himself, but I can give you something as to the attitude of the company in the Philadelphia district toward the present situation. They claim that to carry out the most conservative construction program which will meet the emergency war needs as they will develop before the end of the winter of 1919-20 will require the expenditure of \$20,000,000. Our estimates are somewhat below that. We feel that \$13,000,000 is probably more near the figure than their \$20,000,000.

Mr. WINSLOW. What body of men determined on the \$20,000,000?

Mr. COOKE. That is the estimate of the Philadelphia Electric Co.

Mr. WINSLOW. The power company?

Mr. COOKE. Yes.

Mr. WINSLOW. Now they are the power occupying that field?

Mr. COOKE. Yes. Our estimate is \$13,000,000, and I noticed the War Industries Board put in a figure of \$15,000,000 here last week. Personally I do not believe it is possible to come much nearer the actual cost than these estimates, because labor is the big gamble, and I do not believe any of us can foresee the conditions that are going to obtain in the next 18 months in the matter of labor, to come much nearer the final estimate and get a better estimate than is represented by these three figures.

We have been in day-to-day conferences with the officials of the Philadelphia Electric Co. and their bankers, and have thus far been unable to get a proposition from them that we felt we could accept. We have made a proposition to them somewhat along the lines of the one that the Secretary of War described in the Pittsburgh district. We offered to put up 40 per cent of the cost of construction, with the understanding that this amount would include war wastage plus a margin of safety. The war wastage is to be figured two years after the war by a method of arbitration, and is defined as meaning the difference between the then normal cost of this construction and what it had actually cost. I suppose 25 per cent of the cost of construction is as good a guess of what war wastage will be as can now be arrived at.

Now, the reply of the company is that if we should reverse those figures and advance 60 per cent and allow them to put up the 40 per cent that possibly we could get together. But we have felt that in putting up 40 per cent we were certainly going somewhat beyond war wastage, and that we were getting into a position where we were financing private corporations rather than producing the necessary electric power. Now, even if we can not get together with this company on some mutually satisfactory arrangement we will still have to produce the current, because a shortage of 60,000 kilowatts, as we estimate it, or over 100,000 kilowatts as the company estimates it, is absolutely certain for the winter of 1919-20. Of the additional current needed about 50 per cent will go to the shipyards and 10 per cent to the Army and 10 per cent to the Navy, the other 30 per cent being distributed so that you can hardly tell who is responsible. If we can not come to terms with the company there are a number of different things we can do. For instance, we can build an isolated power plant in connection with the Hog Island yard. But from an engineering standpoint this would be a distinct step backward. We

can go in and build this proposed new plant of the Philadelphia Electric Co. at Beach and Palmer Streets, on the Delaware River—build it and own it for the Government—but that would apparently lead to a more direct interest in the operation of that company than would seem desirable. It might even lead to taking the same steps as have been taken at Norfolk, Va., where the Government has frankly taken over the operation of the local company.

Now, I have gone into the details of that Philadelphia situation, in order that the committee may see that it is important; it is necessary, it is imminent that the emergency fleet should take drastic action involving large expenditures of money in that field, no matter what the attitude of the company is. We are naturally doing everything we can to get the company to assume as large a percentage of the responsibility for whatever action is taken as possible, but if they do not take it we will have to.

Now, at Portland, Oreg., the situation is much the same, except that the company there says that they can not do anything.

At Wilmington, N. C., we hope to make a bargain that is comparable to the one that the War Department has made for the Pittsburgh district.

But, after all, in these few places where either the emergency fleet or the Army or the Navy have been able to make reasonably satisfactory arrangements with the operating companies, the total current to be developed is almost negligible as compared with the whole demand. So that unless this bill is passed, or some equivalent legislation, it will make a very serious curtailment in our war preparations as to some parts of the program during the coming winter, and throughout the entire military program in the following winter.

In the matter of building an independent plant at the Hog Island yard, that plant, of course, will be of considerable size and one that just a few years back would have been considered an efficient unit. But in these times when they are putting in 40,000 and 50,000 kilowatt units, and where the rule in the Philadelphia district is to put in 30,000 kilowatt units, it is not unusually large. Of course, an independent plant at Hog Island would be a distinct step backward and one absolutely opposed to the principle on which this bill was drawn, of having one great system where the peak of one district might be met by drawing in current from other districts where the peak did not occur at the same hour of the day.

The question of rates came up yesterday. It is hardly possible, it seems to me, that the Government, building in these times of high prices, can undersell local companies. I think it is entirely possible that the Government may be tempted to charge higher rates for the time being and in certain places than the local companies. Personally, I see no reason why they should not put a surcharge, a supercharge, on some contracts to take care of that, and this without disturbing the general system of charges throughout that district.

We might take the case of the Midvale Steel Co. and conceive that they are in a district which after the war might be oversupplied with electric current. Rather than change the whole system of electric charges in the Philadelphia district, I can easily see that the War Department might enter into an arrangement by which, as long as those gun contracts and other contracts were being executed, the Midvale Steel Co. would pay somewhat extra for at least that

part of its load which was used on certain stipulated contracts. Such super charges would become a part of the expense of building the particular things for which the current was used. I simply suggest that as one way of taking care of exceptional conditions wherever they may arise, without necessarily changing the entire fabric of power charges. As was suggested here yesterday, the rate system is a very sensitive thing, on which both business men and the power companies have made their plans, and which in some instances the public service commissions would object to having changed, if it can be in any way avoided.

May I just say in conclusion, Mr. Chairman, that Mr. Hurley has asked me to say as emphatically as I could that he hoped this committee would cooperate in getting this legislation or its equivalent through to a speedy conclusion, because we are up against this problem of power shortage at 50 different points. These situations are exceedingly embarrassing, without knowing something more than we know now as to the attitude of the Congress toward this whole utility matter.

Mr. WINSLOW. You were here yesterday, Mr. Cooke, and heard the statements as to the charges that would be made to the consumers following the installation of Government plants?

Mr. COOKE. Yes, sir.

Mr. WINSLOW. Have you any thought about that which would enable you to give any light on the subject?

Mr. COOKE. Well, as I recall it, you were asking what would be done if the Government should establish a plant in a community where a privately owned plant was already in existence.

Mr. WINSLOW. I did not mean to pin anyone down to any definite statement, but I want to get the trend of thought of those who have been building up this bill as to equalizing charges between any new power that is built under such legislation as this, and the charges of companies operating under old contracts.

Mr. COOKE. I really have not heard the matter discussed, so that anything I might say would be my own personal opinion. I think the question is somewhat simplified in my own mind by a feeling that there is nothing in this legislation that will lead, certainly not in the immediate future, to the Government doing more than a wholesale business, and wholesale electric prices, or the fixing of rates for wholesale electricity, is not surrounded with the difficulties that you get into when you have to provide for sale to the small consumer, or sale to many different classes of customers. I should imagine, for instance, if we would go ahead with one possible solution in Philadelphia and take over the building of a new plant there under the plans of the Philadelphia Electric Co., we would in the very nature of things be forced to sell that current to the Philadelphia Electric Co., because they have the distribution system. I should imagine it would be a relatively easy matter to arrive at a figure at which current was to be sold them, and they would continue to sell that current to most of their customers under the scale of charges fixed by the Pennsylvania Public Service Commission.

Mr. WINSLOW. That would be optional, would it not, with those who control a new plant, as to whether they sold the companies now in existence or sold to anybody else?

Mr. COOKE. So far as this legislation goes it would be optional; yes, sir. At least I am working under that assumption.

Mr. WINSLOW. I understand you to say you haven't heard much about it and so do not feel qualified to say?

Mr. COOKE. No; I have given only my own personal opinion.

Mr. WINSLOW. That is all I have, Mr. Chairman.

Mr. DEWALT. Would it be your idea, Mr. Cooke, if the Government would take over this Philadelphia system, that that in itself would abrogate and nullify the powers of the Public Service Commission of Pennsylvania in regard to rates and things of that sort?

Mr. COOKE. There again, Mr. Congressman, I am not a lawyer. My assumption, however, is that at a time like this it is the national expediency that obtains rather than fine-spun legal considerations. But I would imagine that this bill would be best administered by leaning as largely as possible upon the present local agencies in control of rates, and that, except in very rare instances, I would not expect that the present system of rate determination would be materially affected. I have seen many of these electric-rate schedules, and they have been built up out of years of experience. They are pretty complicated and usually—each company has one of its own which has been approved, and no two harmonize. I would expect this power administration would have its hands full in other matters without getting into the minutiae of rate determination for some time to come. But I think it is probably a good thing to have the power to do it if the necessity arose.

Mr. DEWALT. Don't you think it would help your Emergency Fleet Corporation in providing for service to have some legislation included in this bill, or at least some regulatory provisions, to prevent discrimination in regard to rates? And permit me in that connection to give you what I think is an instance. Suppose that the Emergency Fleet Corporation should take into its regulatory power, either by condemnation proceedings or by actual taking over, the electric plant in Philadelphia. Now, as a matter of course, a man who was manufacturing a certain article within the limits of the city of Philadelphia, where this plant was located, would in all probability be furnished power at a considerably less rate than a competing manufacturer who was located 50 miles away from that power plant, and he would derive his power from the same plant. I do not mean to assert that the electric company or the governmental authority over that electric company would make an unjust discrimination, but it is quite possible that that would occur and that the manufacturer of the same article 50 miles away from Philadelphia would be placed at a decided disadvantage and could not compete with the manufacturer of the like article within the corporate limits, we will say, of Philadelphia. Don't you think that it would actually help this bill and would help the Emergency Fleet Corporation as well if you had control of this distribution to have some regulatory provisions, or perhaps some regulatory legislation, in this very bill, preventing discrimination in regard to charges for such power, except in so far as such discrimination is dependent upon the actual cost of the distribution of power? That would be for the benefit of all trade and at the same time be for the benefit of the Government.

Mr. COOKE. It is certainly desirable to avoid discrimination. It is up to the judgment of this committee as to whether the bill, as it stands, needs strengthening in that respect.

Mr. DEWALT. In other words, this is somewhat on the line of thought that Mr. Winslow was following yesterday, as I understand it. That is all I have to say.

The CHAIRMAN. Mr. Stiness, do you wish to ask Mr. Cooke any questions?

Mr. STINESS. No; I do not think I have any.

Mr. PARKER of New Jersey. Mr. Cooke, you spoke of the difference between wholesale and retail contracts and rates—that is, wholesale rates and consumers' rates—as affording a margin so that the contract as to wholesale rates might not affect consumers' rates. Can you tell me what the difference is between those rates in general, under the present system? How much has been charged on wholesale contracts and how much on consumers' contracts, say, in the Philadelphia district?

Mr. COOKE. Well, they recently increased all the rates by 10 per cent, except, as I recall it, those to household consumers. But the rate system, as it was before that 10 per cent increase was made, began at seven-tenths of 1 cent, which was the rate charged to the Philadelphia Rapid Transit Co.,  $7\frac{1}{2}$  mills to the Pennsylvania Railroad Co., and, I think, there were some power contracts of considerable size at about 1 cent per kilowatt-hour. And from there the rate goes up to a maximum of 9 cents. I rather imagine that the average price paid by the small shopkeepers is about 7 cents and for small power users about 5 cents.

The average for all the current in that district, including what was sold at these very low prices to public utility companies, is 2 to 3 cents—that is, the average for all their current, is approximately 2 to 3 cents.

Mr. PARKER of New Jersey. Then, the average is 2 cents, while some of the big contracts are as low as 7 mills?

Mr. COOKE. Yes, sir; it is only within the last few years that this marked discrepancy between the high and the low has been much cut down. Four years ago the highest rate was 15 cents and the lowest rate was seven-tenths of 1 cent.

The CHAIRMAN. Per kilowatt hour?

Mr. COOKE. Yes; that 15 cents was exceptional service for fans and things of that kind; but they had quite a good deal of business at 12 cents.

Mr. PARKER of New Jersey. So that there is really a large margin between the wholesale rates and the retail rates to the consumers?

Mr. COOKE. A very large margin; yes, sir.

Mr. PARKER of New Jersey. And that margin is, therefore, so large that a change in the wholesale rates—a rather larger wholesale rate—would not be expected to affect the retail rates at all?

Mr. COOKE. Certainly not so much as one would expect.

Mr. WINSLOW. Mr. Cooke, where would you suggest that the dividing line would come in manufacturing, for instance, as between a large consumer and a moderate consumer?

Mr. COOKE. I really can't answer that question. I would expect that if you took a list of all the power consumers you would find

in each community a fairly logical line between what you might call large power consumers and small ones. I have never seen a schedule, that I recall, where there was a gradual grading from top to bottom. The Midvale, for instance, wants 10,000 kilowatts. We want, as I recall it, over 20,000 at Hog Island, and there are a number of other consumers in Philadelphia in that general class.

Mr. PARKER of New Jersey. And what did the Midvale get it for? What rate?

Mr. COOKE. I don't know what their rate is.

Mr. PARKER of New Jersey. It was one of the low rates, though, I suppose?

Mr. COOKE. That I can't be sure of. I rather imagine that their rate is perhaps higher than you would expect to find it, because, if I recall rightly, they had to put in a long high-tension line to reach them, and it has been the practice of that company—and I am not criticizing it—during the first few years of the contract, to help absorb part of the cost of the distribution system through a somewhat higher rate.

Mr. PARKER of New Jersey. You mentioned another large consumer there.

Mr. COOKE. At Hog Island?

Mr. PARKER of New Jersey. Hog Island; yes. Do they get wholesale rates or retail rates?

Mr. COOKE. I imagine the rate at Hog Island would be a fairly good one, because this plant is relatively near their present lines.

Mr. PARKER of New Jersey. Relatively low you mean by "good"?

Mr. COOKE. Yes.

Mr. PARKER of New Jersey. Well, would it be 1 cent or 2 cents or 7 mills, or what?

Mr. COOKE. It wouldn't be 7 mills. I should say a cent and a half, possibly. This is an absolute guess, but I will be very glad to send you a copy of the rate schedules of the Philadelphia Electric Co. if you are interested.

Mr. PARKER of New Jersey. A comparison of these rate schedules is more important to us than anything else, in order to bear out your view that the change in wholesale rates might not affect consumers' rates.

Mr. WINSLOW. Aren't all those rate schedules for power taken for wholesale purposes subject to advance from time to time, according to the necessities of the producing company?

Mr. COOKE. I think not.

Mr. WINSLOW. During the term of the contract?

Mr. COOKE. They are all supposed to be included under a rate schedule submitted and approved by the public-service commission.

Mr. WINSLOW. Yes; but if the price of producing electricity increase from time to time by virtue of the increased cost of coal and labor, etc., they must get more or they would go broke.

Mr. COOKE. I don't think the contract would hold in the face of a change ordered by the public-service commission.

Mr. DEWALT. That has been decided by the courts.

Mr. WINSLOW. How is that, Mr. Dewalt?

Mr. DEWALT. That has been decided by the courts very lately that irrespective of a contract made between the consumer and the furnisher of power, if the public-service commission authorizes a higher

rate, notwithstanding the contract for a lower rate, a transit company, for instance, can raise passenger fares on its transit lines.

Mr. WINSLOW. Would you think that in Pennsylvania the public-service commission would authorize the advance of any rate that the Government might put out under this bill as it stands?

Mr. DEWALT. No; I doubt that it would.

Mr. WINSLOW. In that case the man who had the Government current would get the advantage in rate over the man that bought from the general company.

Mr. DEWALT. The reason I doubt that is this: I believe that the Federal authority once having been in control would be the supreme authority, even above the public-service commission of the State. That is the reason I say that. But in two States it has been decided, as I have said. In the State of New York it was decided within the last, possibly, six months that the ruling of the public-service commission in regard to rates for transportation, we will say, over transit lines, was binding upon the company as well as upon the public, and the same thing was lately decided in the State of Pennsylvania.

Mr. ESCH. Was that under the doctrine of this measure?

Mr. DEWALT. Yes.

Mr. COOKE. That was true in the case of a contract between the Philadelphia Electric Co. and the Philadelphia Rapid Transit Co. They had a contract at seven-tenths of a cent and they acquiesced in the ruling of the State public-service commission that raised that rate to  $7\frac{1}{2}$  cents.

Mr. DEWALT. Even without an acquiescence, the ruling of the State public-service commission has authority to raise the rate regardless of the contract existing between the parties.

Mr. ESCH. Mr. Cooke, Congress gave the right to the Fleet Corporation to construct vessels, did it not?

Mr. COOKE. Yes, sir.

Mr. ESCH. And if I remember rightly, the law provided a capitalization of \$50,000,000.

Mr. COOKE. Yes, sir; I think that is the capital.

Mr. ESCH. And, of course, the Government subscribed to practically all of the stock.

Mr. COOKE. Yes.

Mr. ESCH. Now where we gave that corporation the duty of constructing ships, it carried with it the power of developing the necessary power for such construction. That being true, is there a shortage of power development under the Emergency Fleet Corporation for the construction program which that corporation is undertaking?

Mr. COOKE. At the moment our program is not being held back on account of a power shortage. We are guarding, however, against shortages that to-morrow or next week, or at some future time, will become very real, in the absence of action, even though the actual retardation of the program will not ensue for a year or 18 months later.

Mr. ESCH. You are anticipating the future needs?

Mr. COOKE. We are anticipating future needs; yes. In the Philadelphia district, for instance, it is only the difference in the judgment of two engineers as to whether if we begin to-morrow we will avoid the shortage that is threatened in the winter of 1919-20.

One group of engineers says the necessary work can be done in 14 months; another group says it will take 18 months.

Mr. ESCH. Well, my idea is that the Fleet Corporation now has the power to build as much power plant as necessary.

Mr. COOKE. We have got the money and the power to provide the necessary plant, but if we go ahead and act on that we will be developing at many points independent isolated plants that are not as efficient as the central stations or the superstations would be, and we hesitate to do that.

Mr. ESCH. Although there is no question of power?

Mr. COOKE. And then, of course, you must add this, that we can't live to ourselves alone. Our program is inevitably tied up with the program of the Army and Navy. While we might go ahead and play an independent game and provide the power actually needed for the building of ships, it will make our action futile, because the Army and Navy not being able to carry out their part of the program we might just as well not have the ships.

Mr. ESCH. Well, my thought arose in connection with the fact that the Fleet Corporation really dominated a field, so far as power goes.

Mr. COOKE. Yes, sir.

Mr. ESCH. The Army in another field, the Navy in another field, etc., but in the Philadelphia field, then, you still think that you have got to have an increased appropriation for the development of power?

Mr. COOKE. We do.

Mr. ESCH. Outside of the power you now have under the Fleet Corporation act?

Mr. COOKE. Yes, sir.

Mr. ESCH. Is it for lack of money that you come to Congress under this bill and seek to get more power development under this act, or have you funds enough under your Fleet Emergency Corporation to increase your power facilities to the extent you require them in the Philadelphia field?

Mr. COOKE. No; we feel that we have enough unallocated money to do all that is absolutely essential for the shipbuilding program at Philadelphia. But if we acted on the same principle and to the same extent at all the places where the shipbuilding agency requires power, we would not have the money to do it. Philadelphia is one of the weakest points in the country, one of the most serious situations, and taking our unallocated money and devoting it to what is absolutely necessary to be done at Philadelphia we can worry by at that point without further funds.

Mr. ESCH. But that is the only point?

Mr. COOKE. That is the only point.

Mr. ESCH. Congress, of course, could increase your capitalization and give you large additional funds which you could utilize in increasing power development; but notwithstanding that remedy, that this universal-power bill would be better, considering the other plants of the Government. Is that your thought?

Mr. COOKE. Yes, sir; to give the Emergency Fleet—to add more or less indefinitely to the funds that we now have and to authorize us to go ahead on the necessary construction for the production of power for shipbuilding will not help the situation materially. It



will strengthen the shipbuilding, but will leave everything else open.

Mr. ESCH. The Hog Island yard has no independent power plant?

Mr. COOKE. I think not. They may have a small one.

Lieut. W. W. STANLEY. I think it has a very small plant.

Mr. COOKE. It is used for the construction of the plant, rather than as part of the plant for the construction of ships.

Mr. ESCH. And they require 20,000 kilowatts additional there?

Mr. COOKE. Yes; and by the time they get all the ways going the power demands for the riveting and general requirements there will be very heavy.

Mr. ESCH. So that they would get that additional power from the existing Philadelphia Electric Co.?

Mr. COOKE. Yes; from facilities that are now in process of being constructed—that is, from additions to what is known as the Chester plant of the Philadelphia Electric Co.

Mr. ESCH. And this bill will enable the Government to help that plant increase its facilities?

Mr. COOKE. As a matter of fact, Mr. Esch, they don't need funds for the additions that are being made to that particular plant—yes, they will require some Government assistance for bringing that plant up to where it ought to be, including the reserve.

Mr. ESCH. And your thought would be, therefore, that if the Government by this bill increases that Philadelphia electric plant for the Hog Island yard, it could also increase it for the other shipyards in that vicinity, and thus through a central plant more efficiently and economically develop that power. Is that the thought you have in mind?

Mr. COOKE. Yes.

Mr. ESCH. How is it in the Sound country, in Washington State, where they have a very large water-power development? Are they calling upon the water-power development for their power, or is it contemplated under this bill to develop steam power on the Sound?

Mr. COOKE. As I recall it, about 60 per cent of the power used in shipyards—there is now provided between 50 and 60 per cent—is now provided by the municipal plants, and they have recently obtained permission from the capital issues committee to issue \$5,500,000 of bonds for a further hydroelectric development, which will be owned and operated by the city. A letter recently received from them said that they were not going to put those bonds on the market, I believe, until after the liberty loan, but they are going right ahead with the construction work and the manufacture of the equipment required, and they hope to be able to take care of our needs in that district before the peak, which comes, I believe, some time next summer.

The private company there has some project under way for increasing facilities, and I think they are asking for Government assistance. That is a Stone and Webster property.

Lieut. STANLEY. They were asking for Government assistance. I don't know whether they will now do that, as the municipal plant is going ahead.

Mr. ESCH. Is there an increasing use of the electric current in connection with the manufacture of war munitions?

Mr. COOKE. I think there must be, not only in connection with war munitions, but generally. The general drift of electric prices, as you

know, is down, and as each new low level of price is reached it seems to bring into use facilities of the kind that have heretofore been considered prohibitive on account of the cost of operation.

Mr. ESCH. Well, is it true that products produced by the electric furnace are of a finer quality, and hence better adapted to all conditions than those produced in the ordinary open-hearth or Bessemer process?

Mr. COOKE. I can not say as to that.

Mr. ESCH. I don't know but what Lieut. Stanley might state that.

Lieut. STANLEY. I beg your pardon, Mr. Esch.

Mr. ESCH. Does the electric furnace produce a better quality of steel for war munitions than the ordinary open-hearth or Bessemer process?

Lieut. STANLEY. I am not a steel man, sir. I can't answer that fully, but I know it is used very considerably for special grades of steel. I understand, although I am not absolutely certain, that it is necessary for the high grades of steel.

Mr. ESCH. Well, if that be true, then there would be an increasing demand for current for the operation of the electric furnaces for the production of war munitions?

Lieut. STANLEY. Yes, sir; it certainly has increased in the past year.

Mr. ESCH. And that would be a further need for increasing electric power under this or some similar measure?

Mr. COOKE. I think the same thing applies to electric riveting; that when you heat a rivet by electricity you melt it equally all through the mass, so that when you upset it the final result is more efficient riveting than is to be had when you heat the rivet in the ordinary blast furnace or in the ordinary way. And, as you know, we are working on electric welding for ship plates, and have every reason to believe that that is coming in. We are trying to anticipate—to keep track of our additional needs for electricity for that purpose. If that proves to be as successful as we have every reason to believe it will be, it will throw a tremendous additional electric load, especially, of course, on the fabricated yards.

Mr. ESCH. That then leads to this conclusion, that the progress of the yard is such in vessel construction and in war munitions that there is an increasing demand for electric current and that demand will continue to increase as the art develops. That would be a general condition, would it not?

Mr. COOKE. Absolutely.

Mr. ESCH. And that would be an additional reason for increasing power development?

Mr. COOKE. I should imagine if we were to come in three months later with a program, we would even in that short time have made considerable additions to the requirements, for the several reasons you have mentioned, as well as others.

Mr. ESCH. Judge Dewalt might throw some light on the use of the electric furnace in the manufacture of war munitions.

Mr. DEWALT. The product obtained by electric current, for instance, in Bessemer steel, is now considered to be essentially necessary, particularly in the manufacture of high-grade tools, because the temper of the tool is better, as they say, as obtained by the electric proc-

ess in the electric furnace than by the Bessemer steel process or the open hearth.

Mr. ESCH. And from your knowledge of the Pennsylvania district is there an increasing use of the electric furnace?

Mr. DEWALT. Oh, yes. The Bethlehem Steel Co. is now going to demand, I think, 12,500 kilowatts more, aren't they, Mr. Stanley?

Lieut. STANLEY. I don't remember the exact figure, but it is a very large increase.

Mr. DEWALT. They are demanding now 12,500 kilowatts more, and for that reason the Government has cut off 25 per cent from all these other industries up there.

Lieut. STANLEY. I think, however, that that demand is not only for electric furnaces, but it is for mechanical power in addition.

Mr. DEWALT. Yes; that is true.

Mr. PARKER of New Jersey. Mr. Cooke, I omitted one matter that I would like to get at. One cent a kilowatt hour means for every hour during the year, and if it is used night and day, 365 days in the year, there is some 9,000 hours and it would be \$90 per kilowatt per year, would it not?

Mr. COOKE. Yes. That assumes a 100 per cent load factor. Of course, you realize that one of the reasons for low rates is that the most desirable current is current that is utilized throughout the 24 hours.

Mr. PARKER of New Jersey. If it was used throughout 24 hours it would be about \$90 a year, I make it.

Mr. COOKE. Yes, sir.

Mr. PARKER of New Jersey. Now, what I wanted to ask was, you said that most furnaces among new plants were 30,000 to 50,000 kilowatts. What does it cost to put up the engine and boiler that would furnish 15,000 kilowatts, and the electric machinery?

Mr. COOKE. I haven't got those figures. I am not an electrical engineer. In ordinary times \$75 to \$100 per kilowatt are usual construction costs; \$150 and \$200 are actual costs at the present time. I have recently seen estimates as high as \$250 per kilowatt. The figures are two to three times what they were in peace times.

Mr. PARKER of New Jersey. Is it possible for you to get and let us know these figures?

Mr. COOKE. Yes; I can do that very easily.

Mr. PARKER of New Jersey. And make a statement showing whether it would better pay the Government if they had a demand for 50,000 kilowatts to put in their plant—or at least show what would be the cost of the plant and what would be the saving between 1 cent and 1½ cents, or whatever you are paying now. I think we would like to know the difference between the purchase rate and the manufacture rate, because it might save the Government—they might save enough in a very few years, or even a few months, to pay for their plant. Of course, they can make it for less than a cent or they wouldn't sell it for less than a cent, and you pay more, of course. The question is the cost of that plant as compared with the cost of current purchased. Nothing has been told us about the way this money is going to be expended in plants and how it would be needed in plants.

Mr. COOKE. Well, I think that the War Industries Board has tentative estimates of the cost at every point where financial assistance has been requested.

Mr. PARKER of New Jersey. I would like to know the tentative estimates and the tentative royalties at the two different rates, 1 cent or  $1\frac{1}{2}$  cents. One cent is what it is manufactured for, and you say you are paying about a cent and a half.

Mr. COOKE. One thing I could do that perhaps would answer that last question is to give you a list of the rates that we are paying in the Emergency Fleet.

Mr. PARKER of New Jersey. For large quantities at Hog Island or wherever it may be.

Mr. COOKE. Would that completely answer your question?

Mr. PARKER of New Jersey. Not unless you give me the cost also of the plant; what it would cost to supply Hog Island; what the plant would cost to supply Hog Island, and the rate you now pay, and what the rates—what the cost of manufacture is, which we can tell pretty well from the plant.

Mr. COOKE. I will be very glad to give you a memorandum on that.

Mr. PARKER of New Jersey. If you will put that in your testimony I will be very much obliged to you.

Mr. ESCH. Just one question, Mr. Cooke. This bill contemplates the Government itself may construct a separate, independent plant, and it also contemplates that the Government can aid in the increasing of the power facilities of an existing plant. The Government will not use the first power if reasonable concessions can be made with the existing plant.

Mr. COOKE. I should say that would be good policy.

Mr. ESCH. Would there be some isolated sections where, owing to the absence of existing plants, new construction would be a necessity?

Mr. COOKE. The country is pretty well covered, Mr. Esch, but I would not be surprised if in the course of a year or two some situation such as you have in mind would develop.

Mr. ESCH. Could or would the Government use this power granted in this bill in a coercive way to secure a beneficial contract or agreement with existing plants?

Mr. COOKE. I think when the Government has this power that the private companies, as a rule, will come forward with better propositions than they are in position to come forward with now. They are pretty apt to follow some general lead or principle. They realize that the Government is not now in a position to afford any general relief. Should this bill or some comparative measure pass, I think the companies will be in a position to be much more generous in providing private funds than they are to-day.

Mr. ESCH. Do you think it would be wise to keep in this bill the power in the Government to construct independent plants?

Mr. COOKE. Absolutely.

Mr. ESCH. Whether it used the power or not?

Mr. COOKE. Absolutely.

The CHAIRMAN. If you are through, Mr. Cooke, I will say we are very much obliged to you.

Mr. DEWALT. Before you adjourn, Mr. Stanley, would you object to having incorporated in your testimony this statement that the engineers of the Lehigh Navigation and Electric Co., which really controls this Hauto company of which we have spoken, have estimated: That upon the location of suitable sites for power plants in the anthracite coal fields, which would use small size fuel and render unnecessary the use of railroad equipment and coal that otherwise would be required for transporting fuel to a large amount of small isolated plants; that the electrification of the anthracite mines now operated by steam would release 8,000,000 tons of coal per annum that is now used for power purposes; that it would also release 3,750 men now used for power production in mines; and that if these men were put to mining coal a further annual production of 2,000,000 tons of coal would come from it. It is estimated further that this installation would bring 70,000 kilowatts in addition, and would release 840,000 tons of coal, which would otherwise be required to operate the several isolated plants, and the transportation of this coal would require the use of 16,850 50-ton, or one train of 56 cars each daily?

Of course, you don't know the accuracy of these figures, but does your general survey of this region lead you to believe that that is approximately a fair estimate?

Lieut. STANLEY. I don't recall the figures. I do know that we have a statement from their engineers as to what those engineers do estimate, and I would be very glad to check the figures over.

Mr. DEWALT. I wish you would make a memorandum of that, because that is a very startling statement.

(Whereupon, at 12 o'clock, noon, the committee adjourned, to meet at the call of the chairman.)

(The following letters are ordered printed as a part of these hearings:)

THE LIBERTY LIGHT & POWER CO.,  
Richmond, Ind., August 26 1918.

Hon. T. W. SIMS,

*Chairman House Committee Interstate and Foreign Commerce,  
Washington, D. C.*

DEAR SIR: The writer has just read in the Electrical World, August 24 issue, a general outline of bill introduced by you, providing Government control of power plants, etc.

May I express to you my entire approval of the purpose of this bill, and ask that you specially include in the provisions thereof control over so-called public-owned or municipal plants, these latter being oftentimes of considerable size.

The city of Richmond, Ind., has many war industries; city owns the entire electric power system; city council, several of whom talk German, refuses to enlarge the plant to meet needs.

Read the inclosed special bulletin and include city or municipal plants in Government control plan, so that troubles such as bulletin describes can be reached. Tremendous fuel saving can also be made by a proper Government order to poorly designed, inefficient, small electric light plants, both public and privately owned, to shut down such plants where practical and connect same in one large transmission system. You are working on the right lines and can accomplish wonderful results by your bill becoming law.

We must reach some point where an order will have proper force behind it—that will command obedience. It takes a higher power than an ordinary public-service commission to handle this class of work.

Every public utility should get behind this bill and push it along.

Very truly,

THE LIBERTY LIGHT & POWER CO.,  
R. S. ASHE, President.

[Important—The following report has been accepted and concurred in by the directors.  
Please read carefully.]

THE RICHMOND COMMERCIAL CLUB,  
Richmond, Ind., August 22, 1918.

Mr. H. A. DILL,

*President Richmond Commercial Club, Richmond Ind.*

DEAR SIR: The committee appointed by you to consider the necessity of additional equipment at the municipal electric light and power plant, after having conferred with Mr. J. P. Dillon, superintendent of the plant, and familiarizing ourselves with conditions, beg leave to submit the following report:

The necessity of additional boiler capacity at this plant has been recognized by the city council, who appropriated \$55,000 to cover the cost of two new boilers and also provide a dam in river, which will furnish the necessary cooling water for the condensers. Bids on the new boilers were received, but it was found that prices exceeded the estimate by about \$20,000. Council has been asked to provide this additional amount, but to date has persistently declined.

The boiler capacity at the plant consists of six, totaling 2,122 horsepower. Four of these boilers, total 1,104 horsepower, were installed in 1901 and have been in continuous service for 17 years and can be operated only at 150 pounds pressure. Two boilers of 1,018 horsepower were installed in 1913, the operating pressure of which is 160 pounds. No doubt when these last two boilers were installed, they were large enough to carry the load most of the time, but the demands have increased such that at the present, during the peak load, all six boilers are in use. In fact, sufficient time to properly clean and turbine the tubes can not be taken, which is resulting in the very rapid deterioration of the boiler equipment.

Again, when the last two boilers can be used alone at 160 pounds pressure the turbine is operating at its rated pressure and can give its maximum capacity, but as the demand increases and the old boilers have to be cut in, the steam pressure must be reduced to 150 pounds and the overall efficiency of the generating apparatus falls.

Owing to the antiquated type of stokers used on these boilers and that no provision was made to remove the ash and clinkers from the furnaces in an efficient manner, it is simply impossible to operate these boilers at an overload. Could this be done, the present boiler capacity would be ample to take care of any peak load that the plant has had to date.

Additional boiler equipment is an absolute necessity. All are agreed to that. Some funds have been appropriated, but not sufficient to complete the installation. Council has been requested by the board of public works and by the superintendent of the plant to provide the funds. If these additional funds are not provided by September 3, so that contract can be awarded, there will be no possible chance of having new boilers this winter. Under present operating conditions a failure of one or more boilers might occur at any moment, and this will result in many factories being shut down, men thrown out of employment, and stores and homes thrown into darkness. Should such occur, full responsibility must be borne by those who persistently obstruct the appropriation of sufficient money to place the plant in first-class condition.

This committee therefore suggests that a special session of the council be called at the earliest possible moment, and that each member of the Commercial Club be notified by letter, requesting their presence and support when this matter comes up for consideration.

Respectfully submitted.

CHAS. W. JORDAN (*Chairman*),  
WALTER REID,  
DR. F. S. ANDERSON,  
EDWARD H. CURETON,  
*Committee.*

NAVY DEPARTMENT,  
Washington, August 31, 1918.

MY DEAR MR. CONGRESSMAN: I have been in conference with Mr. B. M. Baruch, chairman of the War Industries Board, Secretary of War, and others

with regard to the power bill now before Congress. The question of securing ample power for the ever-increasing contracts for the Navy as well as for the Shipping Board and other war industries is one that gives us much concern. It is essential that ample power be supplied, and there is no adequate provision in any of the appropriations of the Navy for financing agencies to secure the additional power facilities. The legislation proposed in your bill would confer this authority and give the appropriation necessary, and I trust it will come along at an early date.

Sincerely, yours,

JOSEPHUS DANIELS.

Hon. THETUS W. SIMS,  
*House of Representatives, Washington, D. C.*







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# EMERGENCY POWER BILL

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## HEARINGS

BEFORE THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE  
OF THE HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

SECOND SESSION

ON

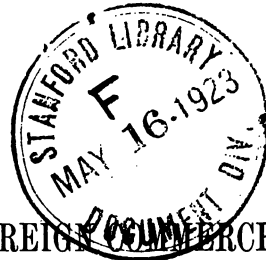
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SEPTEMBER 12 AND 16, 1918

PART 2



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1918



*Bound incorrectly*

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE.

HOUSE OF REPRESENTATIVES.

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SAMUEL E. WINSLOW, Massachusetts.  
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WALTER R. STINESS, Rhode Island.  
JOHN G. COOPER, Ohio.

W. ALVA TAYLOR, *Clerk*.

D. of D.  
MAY 22 1919

## EMERGENCY POWER BILL.

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
HOUSE OF REPRESENTATIVES,  
*Thursday, September 12, 1918.*

The committee met at 10.30 o'clock a. m., Hon. Thetus W. Sims (chairman), presiding.

The CHAIRMAN. The committee will come to order.

Now, gentlemen, you will remember Mr. Gans was wanted for the purpose of presenting his views on certain words and phrases in the bill. I don't remember just who wanted him, but I do remember that Judge Dewalt was one. I suppose Mr. Gans will not want to make a general statement touching the bill, Mr. Esch?

### STATEMENT OF HOWARD R. GANS, COUNSEL FOR THE TREASURY DEPARTMENT.

Mr. ESCH. Do you desire to make a general statement, Mr. Gans?

Mr. GANS. I don't think that will be useful, sir, because there are specific points that I fancy you gentlemen want to have my views on, and the point of view from which I incorporated them in the bill, and a general discussion I think would hardly be useful. I might say this, however: I drew this bill after consultation with the people in the power section of the War Industries Board, who told me, generally speaking, as they have told you more specifically, what the exigencies were and how immediate and urgent the demand was for increased power; and in carrying out that idea I felt that there was only one theory that one could adopt, and that was to treat it as an emergency matter and practically as a military necessity, and therefore to endeavor, with such safeguards as would not interfere with prompt and efficient action, to vest the President with all possible power to control the situation. I say that generally, because that may cover some questions in the minds of many of you gentlemen as to why powers were attempted to be conferred in such broad terms.

Mr. ESCH. We might go over the bill, Mr. Chairman, by sections.

The CHAIRMAN. Anyone who wishes to ask any questions may do so. I didn't understand that Mr. Gans was desired to be heard on questions of policy, but more as to why he drafted the bill in the words and phrases used.

Mr. PARKER of New Jersey. I will ask a question that I think is introductory.

Mr. GANS. I notice on page 4, lines 4, 5, and 6, is the general power to construct at any place within the boundaries of the United States, which includes waters of the United States and therefore all water-power companies, "such power plant or power plants as he may

deem necessary." And in section 8, page 12, lines 16 to 21, it provides that he may retain and operate "for such time as he may deem necessary or advisable for the purpose of selling or otherwise disposing thereof." Now, did you intend that—that question, I see, was put by some of the committee—that the President should have general power to build as many power plants as he deemed necessary, whether water power or steam power, and hold them as long after the war as he thought advisable, and operate them?

Mr. GANS. My theory was that he ought to have the authority to build as many plants as in his opinion the exigencies of the war situation demanded, and that he ought to be permitted to operate them until such time as he could make an advantageous transfer of them, so that in the sale or transfer of them the United States should be protected from absorbing an undue amount of loss. My theory was that if you tried to limit that period specifically—and the limitation of it was considered in the drafting of the bill—that in many places you might come across this situation: That there was only one financial interest or one group of financial interests who would be prepared to take over a power plant that had been built by the Government, and that so soon as you fixed a limitation to the time during which the Government could operate, they would practically be in the situation where they could get that plant at their own price or force the Government to scrap it, and I thought that the United States ought not to be put in that situation, and that it would be much better to vest the President with broad discretionary power, after you had defined the purposes for which he should exercise that power by saying "for such time as he may deem necessary or advisable for the purpose of selling or otherwise disposing thereof," so that he might continue to operate it until he could secure a fair price for it.

Mr. PARKER of New Jersey. Does that general power on page 4, lines 4 to 6—"to construct at any place or places within the boundaries of the United States such power plant or power plants as he may deem necessary"—does that or not include all the plants provided for in the water-power bill?

Mr. GANS. I am not as familiar with the water-power bill in its scope as I ought to be to answer that question.

Mr. PARKER of New Jersey. Well, does it cover Niagara?

Mr. GANS. It would permit the President to build a power plant to be operated by hydraulic power anywhere within the United States. But my thought was that the water-power bill contemplated primarily the erection and maintenance of power plants as commercial ventures such as would be possible in normal times when construction costs were normal and was bound to be ineffective for the purpose of increasing our power facilities during this period of strictly abnormal costs.

Mr. PARKER of New Jersey. Well, the first part of your answer I think covers what I asked—that that language would give him the power to build anywhere.

Mr. DECKER. What language do you refer to, section 8?

Mr. PARKER of New Jersey. No; section 2, page 4, lines 4 and 6.

You say it would give him power to build hydraulic plants anywhere?

Mr. GANS. That is my conception of it, sir, and it was drawn with that purpose.

Mr. MONTAGUE. Build them anywhere for what purpose?

Mr. GANS. For the emergency purposes with which this bill deals as a whole.

Mr. MONTAGUE. For commercial purposes or military purposes?

Mr. GANS. For military purposes, defining that term as it must be defined in the present exigency broadly enough to include the provision of power for purposes subsidiary to what might be called the limited military purposes.

Mr. MONTAGUE. You mean to say, then, that the object would be military, but that there might be necessarily an incidental output devoted to commercial uses?

Mr. GANS. Precisely so, sir.

Mr. PARKER of New Jersey. Well, you would have to supply the whole commercial uses of the locality if you had the big plant there.

Mr. GANS. Providing there were no other plants to provide for the nonmilitary purposes and the purposes that were not incidental to military purposes.

Mr. MONTAGUE. The object of my question is this: I understood you to say that the idea in your mind when this bill was drawn was that it was for military purposes, military exigency?

Mr. GANS. Yes, sir.

Mr. MONTAGUE. I wish to know whether the powers given or limitations imposed confine it to military output or commercial output.

Mr. GANS. I think that the language of the bill leaves a wide discretion in the President to determine what is military and what is not, and I think that under the language of the bill he might possibly erect a plant for the purpose of supplying a necessity that might not ordinarily be conceived as a military one.

Mr. MONTAGUE. Then, how would you justify that under the purposes of the bill?

Mr. GANS. I was told that the exigencies of this situation were such—and my information in my relations with other departments of the Government substantiated that—that the need of war production is such, and the lack of power facilities for that production are such, that it is almost impossible to conceive that any power administrator under the President—and much less the President himself—would divert any of the funds supplied or any of the labor or material that would be necessary for the construction of power plants, to any purpose other than that which directly or indirectly appealed to him as being a military necessity.

Mr. MONTAGUE. In other words, that under the present exigencies all economic and industrial production is, ipso facto, military production.

Mr. GANS. Well, I wouldn't go as far as that, sir, because let us say, for instance, pianos. One would say definitely that pianos, the making of pianos and the diversion of labor and material and power to the making of pianos, was not a military necessity.

Mr. MONTAGUE. But the military man might reply that music is a military necessity; that pianos are an incident of music and that they are needed to instill fervor and enthusiasm in aid of the war.

Mr. GANS. They might say that about trumpets and drums, but I don't believe that would apply to pianos.

Mr. MONTAGUE. Pianos might not be very portable, but they might be used in a stabilized army. They are used now in the "huts."

Mr. PARKER of New Jersey. You consider all necessities as military?

Mr. MONTAGUE. I just want to get your viewpoint.

Mr. GANS. I should say that in this present situation everything that is necessary to support the Army is a military necessity.

Mr. PARKER of New Jersey. Or the people.

Mr. GANS. Or the people. And I think that the President or some authority ought to be in the situation to enable the country to provide for those necessities whether for the Army and Navy or for the civilian population, so that we may survive during this war.

Mr. PARKER of New Jersey. Then you would include public service in support of the cities, cars, transportation, water, and all that?

Mr. GANS. I would say that where the transportation was necessary for these purposes that we have been discussing, the Federal Government ought to have vested in somebody who does not need to debate and come for authority each time that something is needed, the authority to provide for the necessities.

Mr. SNOOK. Under this bill as you have drawn it here, as I understand it, you don't expect the President to administer it personally? It will be administered through some officials?

Mr. GANS. I should imagine so; yes.

Mr. SNOOK. Then it amounts to this, does it not, as drawn and the powers conferred here: The question of whether a plant shall be built or a plant taken over by the Government will be in the discretion of the person administering the law in the last analysis?

Mr. GANS. I should think and anticipate that administratively that would be so, with this qualification: That the matter is of such great importance that I would conceive that the President would keep in fairly close touch with it. I may be mistaken, but I regard it as quite as important as the manufacture of munitions or the drafting of an army, because you can not manufacture munitions without power, and there is no use of drafting an army if you have not the munitions.

Mr. MONTAGUE. Why wait for over a year, then, to bring forward this very exigent measure?

Mr. GANS. It is rather difficult for me to answer that, sir.

Mr. MONTAGUE. We will have to answer that question on the floor of the House. That is the only reason I am putting it now.

The CHAIRMAN. I suppose you recognize, Governor, that Mr. Gans was only called upon to draft the bill according to instructions and had nothing in the world to do with whether it was needed or not needed.

Mr. GANS. I think it would be better to ask that question of the Secretary of War, the Secretary of the Navy, and Mr. Baruch.

Mr. ESCH. I would like to ask some questions on the draft of the bill.

On page 1, subsection A, you define what you mean by "power plant." In subsection B, on page 2, you define what you mean by "private power plant," as including those operated by any person, association, or body politic. Now, what do you mean by those two definitions, and what power plants would be left in A that are not embraced in B? Having in mind the meaning of "body politic."

Mr. GANS. It is body politic "other than the United States," and I think probably that the only distinction between the two is that

"private plant" would cover everything other than a plant operated by the United States.

Mr. ESCH. I didn't get the last part of your answer.

Mr. GANS. A private plant would be any power plant other than one that was constructed or operated by the United States itself.

Mr. ESCH. So, then, the only object of putting in A is to cover the Government plant? Is that it?

Mr. GANS. It was done rather for what you might conceive as symmetry of statement.

Mr. ESCH. Well, of course, if the Government already owns the plant, its right of operation would not be necessary to be defined in this bill, would it?

Mr. GANS. I think not, sir. The two definitions might be combined if it were thought desirable, and replaced by a definition that "the term private power plant" means a power plant. Then use the definition in A, "owned, operated," etc., "by any person, association, corporation, or body politic, other than the United States, for the purpose," etc.

Dr. Maltby, you had a suggestion. Have I covered what you had in mind?

Dr. MILO R. MALTBY. If you will refer to those lines 9 and 10 being restricted.

Mr. GANS. Of course, there is the provision in lines 9 and 10 of generating, etc., developing power "either for sale or for the use of the owner or operator thereof or of some other person," but it could be so defined if you thought there was any advantage, and the words "private power plant" used throughout the bill.

Mr. SNOOK. Does that term, then, give the Government power to take over municipally-owned plants?

Mr. GANS. It is intended specifically to do that, and perhaps I may explain why. One of the problems that was put to me when I started the drafting of the bill were situations in some municipalities where, as I was told, the municipalities would be quite ready to have that power vested in the Federal Government so that their plants and private power plants, either in existence or those that might be built, should be brought together and operated as practically a single unit, either through the leasing of power or the interchange of power or the hooking up of two plants by transmission lines.

Mr. SNOOK. Does that go far enough to allow the operation of electric street railways? I see where some corporations are asking the Government to help in that particular.

Mr. GANS. It would go far enough to take over the power plants that supply the street railways, but it would not go far enough to permit the Government to operate the street railways under any provision in the bill that I intended to have there or that I know is there.

Mr. SNOOK. You don't intend that anyway?

Mr. GANS. No, sir.

Mr. MONTAGUE. May I ask this question—I don't know whether it is in your line or not—it isn't contemplated to take over all the power plants in America, is it?

Mr. GANS. I should think not, sir.



Mr. MONTAGUE. What will become of those not taken over, if you throw them into competition with those that are taken over by the Government?

Mr. GANS. I think probably in localities that where power plants now operating are sufficient the Government won't enter the field at all.

Mr. MONTAGUE. Won't they all be inefficient to an extent to justify them, in their own opinions, in asking the Government to aid them by loans?

Mr. GANS. Well, I think not; and I think that if they do, they will probably find that their applications will be turned down.

Mr. MONTAGUE. Suppose they come to Congress and ask that they be not turned down?

Mr. GANS. The last thing that I should undertake to do, sir, would be to determine in advance how Congress would look upon an application, especially without knowing something about the merits of the special application.

Mr. MONTAGUE. Have you followed the somewhat analogous question of railway ownership—the short-line railways of this country?

Mr. GANS. I have followed it generally in the newspapers, and I know that the Director General has had his troubles, and that Congress has been much plagued.

Mr. MONTAGUE. And a good many short-line railways have come to the Treasury, too, haven't they?

Mr. GANS. I don't know that.

Mr. STEPHENS. If we had our way about it we would have had them all in. It was the biggest mistake we ever made.

Mr. ESCH. Under subsection D, page 2, you say:

The word 'operator' means the owner, lessee, or other person in general control or operation of any plant, factory, or enterprise.

Why didn't you insert the word "power" before the word "plant"?

Mr. GANS. Well, there were two thoughts—there was one special thought at that time—I am inclined to think that it hadn't any particular validity—and that was that it might in the course of the drafting of the bill be applied to the subsidiaries of power plants for which we provided; that is, plants for the creation of gas, toluol, explosives, and other things that are manufactured in connection with the creation of power; and therefore when I drew the definition, anticipating that possibly in the course of the bill it might be required to be sufficiently broad to cover that, I defined the word "operator" that way. I think on examination of the bill it will be found that every time the word "operator" is used it is in connection with the operator of a power plant; so that it really makes very little difference whether the word "power" is put before the word "plant" here or left to the various sections in which the word "operator" is used. The only reason that I can see for leaving it in its present form is that, if in the course of the progress of the bill through Congress some change shall be made, you will have the word "operator" defined so as to reach the operator of any plant that you want to deal with in the various provisions contained in separate sections of the bill.

Mr. ESCH. During Mr. Meyer's testimony Judge Dewalt, of the committee, called his attention to the use of the word "easement," in line 20, under subsection E, in the definition of the term "property." What was your thought in including that word "easement"?

Mr. GANS. My idea was that we should be in a position to take over franchises or any other incorporeal rights in real or personal property, and I used the word "easement" as a broad general term that would cover some classes of rights that might not be covered by any other term that occurred to me.

Mr. ESCH. In line 6, page 3, you use the expression, "the whole or any part of," and then following that a semicolon. It is rather odd grammatically. I won't say that it is ungrammatical, but would the use of the word "thereof" in place of "part of" meet your purpose?

Mr. GANS. That is on page 3, in the definition of "to acquire"?

Mr. ESCH. Page 3, line 6. You use the language:

The term "to acquire" means to purchase, requisition, condemn, or take over the title to, or to lease, requisition, condemn, or take over the right to use, occupy, or operate the whole or any part of; and.

Mr. GANS. I think the semicolon should be stricken out. I think it was inserted as the result of a typographical or printer's error.

Mr. SNOOK. What word is that that should be stricken out?

Mr. GANS. Just the semicolon. It would read just as it does at present, "unless it should be limited by the context, includes all such acts." All I was trying to do there was to provide that when, in any part of the bill a power to "acquire" was given, it should mean that the acquisition could be made by any of the means provided in G, unless the context made it apparent that it must rationally be confined to the use of one of those methods.

Mr. ESCH. I thought you might use the word "thereof" in place of "of"—"operate the whole or any part thereof, and unless it shall," and so on.

Mr. GANS. That might be an improvement.

The CHAIRMAN. I was going to say it certainly would not be objectionable to use the word "thereof" and then strike out the semicolon also.

Mr. ESCH. I notice in subsection H you give as the definition of the term "within the boundaries of the United States"—

Mr. GANS (interposing). May I go back before I try to answer that?

I wonder whether, on reflection, you will think that "thereof" ought to take the place of "of," because there is nothing to which the "there" would refer.

Mr. SNOOKS. What does the "of" refer to?

Mr. GANS. To anything that might be acquired.

Mr. SNOOK. There is no word in the paragraph that it refers to, is there?

Mr. GANS. No.

Mr. SNOOK. It is very confusing, I think.

Mr. GANS. Well, there isn't any word that "the whole" refers to, either. There isn't any word that any part of it refers to. It is like a definition—a dictionary definition—an arbitrary one for our purposes to be sure, but assume that it—

Mr. PARKER of New Jersey (interposing). Couldn't you leave out "the whole or any part of" all right? Just say, "the right to use, occupy, or acquire, take over or operate."

Mr. GANS. I think it is desirable to have the power to differentiate between portions of what you take over.

Mr. DECKER. I rather agree with you, but go on a little farther on that. It occurs to me that make "of" ought to be out of there—"the right to take over the whole or any part"—what the "of" refers to. Then up above you take over the title to. Shouldn't the "to" be left out? So far as "acquire" is concerned it means taking over the title.

Mr. GANS. I think that suggestion might improve the language.

Mr. DECKER. I wouldn't say it was very important.

Mr. ESCH. Now, I see you embrace within the definition "within the boundaries of the United States" practically all territory over which the United States has jurisdiction.

Mr. GANS. My thought was, in consonance with what I said before, that this was a military necessity and that we couldn't foresee where it might be necessary to exercise the authority that in the course of this war it might be desirable to produce munitions, let us say, in the Philippine Islands, or it might be necessary to supply munitions or a munition-plant or other plant in Porto Rico. I didn't want to limit the President so that he couldn't do that under the powers of this bill if it proved to be necessary. I don't regard it as very important, but I was trying to give the President comprehensive powers, and I thought that this was one he ought to have.

The CHAIRMAN. If we get tangled up in a war with Siberia I don't know but what we might want to have some munition plants in the Philippines.

Mr. ESCH. We are developing large power on the Isthmus of Panama, you know.

The CHAIRMAN. Yes; that is true.

Mr. ESCH. I notice in line 14 you use the words "its allies"—"war between the United States and the Imperial German Government and its allies." We have only declared war against Austria-Hungary.

Mr. GANS. In this instance also I was trying to cover the possibilities we may be at war with Bulgaria and Turkey before long, and the thought was that the powers ought to be continued as long as we were in the present war.

The CHAIRMAN. As long as the Government of the United States is in war.

Mr. GANS. Yes.

Mr. PARKER of New Jersey. I suggest "between the United States and the Imperial German Government or any other European nation."

Mr. ESCH. I think that can be modified to meet conditions. What is the necessity of putting in the bill the last paragraph on page 3?

Mr. GANS. I thought this about that: There are certain penal provisions in the bill, and I thought it might be well to make it explicit that when any corporation was required to do something in this war emergency that there should be no possibility of passing the buck from one officer or agent of the corporation to another, and that the bill should make it explicitly clear that when the order went forth it was to be carried out by anybody who had the power to do it. It

might result as a matter of law without this provision, but I thought it could do no harm and might do some good.

Mr. ESCH. I have no more questions on section 1, Mr. Chairman.

The CHAIRMAN. Well, I don't think we will limit the members to any part of the bill. I understood we wanted Mr. Gans to explain the draft of the bill as he drafted it, and I suppose in a general way he is really confined to that feature. If any members of the committee wish to ask questions about any part of the bill, they are at perfect liberty to do so.

Mr. ESCH. Then I will take up section 2. You use, in section 2, Mr. Gans, the word "authorized."

Mr. GANS. I noticed that suggestion that you made to Mr. Meyer, that it be "appropriated," and Judge Sims suggested some parliamentary reasons why it would be preferable.

The CHAIRMAN. Way back there, when we began to consider this bill, there was a thought that they might ask for it to be added to some appropriation bill or that the appropriation would have to be made through an authorization, and in redrafting the bill afterwards I think I was as much or more at fault than anyone else for not striking out the word "authorized" and putting in the proper language, "appropriated." So I think that change ought to be made. I will move, myself, when we get into executive session, to change it to "appropriated" wherever it occurs in that sense.

Mr. ESCH. Now, Mr. Gans, in paragraph 2, page 4, the President is authorized to install these plants, structures, machinery, and appliances "either through agents or contractors employed by him." My impression is that we have adopted a section in some bill cutting out the cost-plus plan of construction, have we not, Mr. Chairman?

The CHAIRMAN. That I don't know.

Mr. ESCH. The question in my mind is whether it would be wise for us to put a limitation here that the cost-plus plan of construction should not obtain.

Mr. PARKER of New Jersey. They have varied the cost-plus plan so that it has been helped a great deal. They have made it so that there is more plus on the small contracts than on the large ones, or something of that sort, so as to reward a man for doing it cheaper.

The CHAIRMAN. To be frank with you, in talking to gentlemen about the bill before it was ever introduced I never considered that feature at all. I was only considering what they had to have and all they had to have and no more.

Mr. GANS. My general thought about that, sir, is this: That it is an administrative problem. From what I learn of the experience of the Government I am inclined to think that the cost-plus plan is not likely to be adopted under any circumstances where any other plan can be adopted. And, generally speaking, I think we get better results by not trying to limit the administration in matters of detail such as that. That is a question of policy that you gentlemen will determine.

The CHAIRMAN. It is something upon which I have no opinion formed at all.

Mr. PARKER of New Jersey. I think they pay them on what you might call a cost-minus plan, by which the contractor gets a bonus for saving money for the Government on the contract.

Mr. ESCH. He gets a bonus where he constructs the plant for less than cost, on a progressive scale. I think that is the last plan they have adopted.

Mr. PARKER of New Jersey. That is the cost-minus plan.

Mr. ESCH. Yes. Now, take the words in line 17, "owner or operator," Mr. Gans, page 4. You have defined "operator," on page 2, as meaning the "owner, lessee, or other person." Why not use simply the word "operator"?

Mr. GANS. I think that would be an improvement.

Mr. ESCH. You have already defined it.

Mr. GANS. Yes; I think that would be an improvement.

The CHAIRMAN. You will make a note of that, Mr. Esch?

Mr. ESCH. Yes. I think that occurs in one or two other places further down. Of course in this section you give the President practically power to make the terms of the contract.

Mr. GANS. Yes, sir.

Mr. ESCH. Has the contractee any recourse in case he feels that the terms imposed by the President are unreasonable?

Mr. GANS. Only the general power that is provided and protected by the Constitution—that is, that property may not be taken without due process of law, and the provision in this bill for appeal to the Court of Claims.

Mr. ESCH. You mean the 75 per cent provision?

Mr. GANS. Yes, sir. The President can't take any property without paying for it.

Mr. ESCH. No; I understand that. Where the Government puts in money to enlarge a plant, to put in machinery, to put in appliances it is to be free, you say, from "liens, mortgages, judgments, or other encumbrances whether created by act of the owner or operator of such plant or by operation of law." Would the appliances, machinery, and so on, installed by the Government be exempt from local or State taxation; and if so, how would you segregate that amount from the plant itself which would be subject to both local and State taxes?

Mr. GANS. I should say that the appliances that were installed by the Government under the language of this act would be free from liens resulting from taxation, and the thought was that anything that the Government installed under this provision—the security of the Government upon anything that it installed under this provision ought to be kept unimpaired so long as it continued to be Government property.

Mr. ESCH. Tax free?

Mr. GANS. Tax free.

Mr. ESCH. You don't anticipate any difficulty in administering that feature of it?

Mr. GANS. Possibly I haven't been imaginative enough on that point, but I should imagine that there wouldn't be any serious difficulty in administering it. The corporation could be taxed upon all the personal property that it owned and taxed on its franchise; taxed on its earnings—where there are taxes of that sort—by the States. The only thing that would be exempt from the lien of taxation would be the property owned by the Government.

Mr. ESCH. In subsection 4, page 6, you say, "To acquire any private power plant within the boundaries of the United States." No method of acquisition is prescribed in the bill, is there?

Mr. GANS. That is provided for by subdivision G, on page 3: That "acquire" means to purchase, requisition, condemn, take over the title, "or to lease, requisition, condemn, or take over the right to use, occupy, or operate the whole or any part of."

Mr. ESCH. That is, under your definition of "to acquire."

Mr. GANS. Yes, sir.

Mr. ESCH. In subsection 6.

Mr. GANS. I might say, before we pass that, that Dr. Maltby has suggested an amendment to that which I think ought to be inserted; that that power might very well be limited with respect to municipal plants or limited in some measure with respect to municipal plants.

Mr. ESCH. Have you an amendment to offer?

Mr. GANS. I will consult with Dr. Maltby about it.

The CHAIRMAN. We will consider it when we come to the amendment section. I was going to say this, Mr. Esch: On any of these amendments here touching this bill, like the one that Or. Maltby just referred to, we could consider those amendments in executive session right when it is fresh. I have an amendment prepared to present to the committee for its action.

Mr. SNOOK. On this municipal question?

The CHAIRMAN. Yes.

Mr. ESCH. Of course under this bill and under subsection 6, and possibly 7, page 7, it would be possible to conceive that the Government may have an interest in a plant developing power for purposes similar to a private plant, or even a municipal plant, thus bringing them in some degree into competition.

Mr. GANS. It is possible to conceive, sir; but if I am correctly informed as to the situation, the probabilities are that in any place where the Government would erect its own plant the necessities would be such that that plant would be merely for the purpose of adding power to that which was already in existence and of mobilizing the power already existent, plus the power thus to be created, so that it could be better distributed among the industries of the country. Also I am quite confident from what I am told that in any place where there are existing plants the Government would be more likely to increase the facilities of the existing plant than to erect its own, providing the existing plants were of any size; and if the Government did find it necessary to supplement an existing plant by building a new plant, the two would be brought together either by erecting transmission lines that would hook up the power of the two plants so that they could be utilized as one or by some other means.

Mr. ESCH. You don't think there will be any difficulty, then, from an administrative standpoint?

Mr. GANS. Well, everything is difficult to administer, but I think there are no insuperable difficulties here.

Mr. ESCH. Well, is it workable?

Mr. GANS. I think it is workable; yes.

Mr. ESCH. Of course these municipal plants, or even private plants used for public purposes have their rates regulated by State bodies as a rule. Is it your opinion that where the Government takes over

a plant its rates supplant any rates that are fixed by the regulatory body of that State?

Mr. GANS. I think under the provisions of this bill that would be so.

Mr. ESCH. Would that lead to any clash of Federal and State authority that might make the operation of this law not impossible but probably more difficult?

Mr. GANS. I consulted with one of the public-service commissioners of New York City with respect to that feature, and his opinion was that the public-service commissions throughout the country would be ready to cooperate and to acquiesce in anything that the Government thought necessary for the effective conduct of the war.

Mr. ESCH. Now, under this bill the President has the right to fix the rates and charges and so on and may designate such persons to do that as he sees fit. That might, in a way, mean one-man power. Would it be your idea that that could be better carried out if the rate making were left in the hands of an existing rate-making body like the Interstate Commerce Commission?

Mr. GANS. I thought not, sir, for this reason: That the making of rates would probably, in so far as the power was exercised, be an individual matter, to be determined with respect to the intimate situation in a particular community. The thing that impelled us to consider that problem was a situation that was presented where, as it was described to me, there was a small power company whose power was urgently needed for the public use, and where that power company would not deliver its power to another corporation which was already serving industrial plants in war work unless a very exorbitant rate was paid, and the industries—the departments concerned with the industries—were having a great deal of trouble in getting adequate production on that account. And it seems to me that it would be very much better to leave that to this one man, who is responsible to the President, and to have him fix rates practically on the same principle as he makes contracts.

Mr. ESCH. Of course, many of these rates would come out of interstate traffic. If your power plants are to be located at the mine mouth, they will very likely transmit power across State boundaries, and thus it will become interstate traffic. In our water-power bill we provided that the commission should have charge of rates interstate and left to the States the regulation of rates where the power was developed and was not transmitted outside the State. Would the fact of that bill becoming law come in conflict with the terms of this bill, should it become law, in the matter of regulation of such rates, the commission under the water-power bill being also a Federal agency?

Mr. GANS. Why, there would certainly be a certain superficial conflict there. I should say that it would be resolved by the fact that this bill will probably pass later than the water-power bill, and by the fact that this is an emergency measure, and that the natural construction under those circumstances would be that anything that was operated under the terms of this emergency measure would be operated under conditions that superseded that provision of the water-power bill.

The CHAIRMAN. For the time being.

Mr. GANS. During the emergency. And I may say—if I may elaborate my answer to your question—that if this were a bill to provide for something that was to continue, instead of a temporary measure for an emergency, a great many of the provisions that have been incorporated in it would seem to me to be unnecessary, and that if I were drawing a bill parallel to your water-power bill I should prefer to have a rate-fixing power which was intended to fix rates over a permanent period deliberately vested in a quasi judicial agency, such as the Interstate Commerce Commission. But I don't think you get war-emergency action that way. That is why this provision was inserted.

Mr. ESCH. On page 9, line 8, you use the expression "that no public right acquired by him"—the President—"shall be alienated for any term in excess of five years." Just what did you have in mind when you used that expression "public right"?

Mr. GANS. Franchises in the broadest sense.

Mr. ESCH. Franchises?

Mr. GANS. And the right to use the city streets and public highways. In other words, I was trying to safeguard the possibility that franchises acquired by the Government could, through lack of foresight or vigilance, be transferred to a private corporation for an unlimited period, so that we would have some more permanent franchises to deal with.

Mr. ESCH. On line 7, page 10, subsection 14, there seems to be a rather unusual provision in legislation. It reads:

To amend or modify any contract made by him pursuant to the provisions of this act so as to include therein any terms or conditions which it would have been lawful to include in such contract at the time of the making thereof.

Mr. GANS. I had some doubt about that provision when I drew it, but I was drawing the bill in consultation with a number of people, and there were some among them who had the idea that the power to make a contract, unless there was a power to amend or modify, might be too rigid, and that the President or the agent through whom he operated would be bound by the terms of the contract and could not agree to the ordinary amendments and modifications that the development of the situation might require, and therefore, in deference to that opinion, this provision was inserted. My own opinion is that it doesn't provide for anything that wouldn't be accomplished without it.

The CHAIRMAN. In other words, it wouldn't materially injure the purpose of the bill if it were stricken out?

Mr. GANS. Not at all, sir, in my opinion.

Mr. ESCH. On page 13, line 18, "under the terms of this act prior to the date thereof"—does "thereof" refer to this act?

Mr. GANS. It refers to the termination of the authority.

Mr. ESCH. Now there is a little confusion there.

Mr. GANS. It was intended to refer to that. Probably it isn't as clear as it might be.

Mr. ESCH. You see "act" is the last substantive word.

Mr. GANS. Well, the idea that was intended to be conveyed was that "the termination of such authority shall not affect any contract executed, act done, or any suit or proceeding had or commenced under the terms of this act prior to the date of such termination."



Mr. ESCH. Grammatically, though,, "thereof" relates to "act." That isn't what you mean?

Mr. GANS. No.

The CHAIRMAN. Prior to termination?

Mr. ESCH. On page 14, the middle of the page, where we provide that power for the President to create corporations to carry out the provisions of it, would the \$200,000,000 you ask for in this bill embrace the money that would be needed for the corporations, or wouldn't it?

Mr. GANS. That is subscriptions for the stock of the corporations?

Mr. ESCH. Yes; just as the Emergency Fleet Corporation.

Mr. GANS. It was intended to.

Mr. ESCH. Does it cover the stock that would be required for these corporations to carry out the provisions of this act, and would it be included in the \$200,000,000?

Mr. GANS. That was intended; yes, sir.

Mr. PARKER of New Jersey. You say this gives the power to create corporations?

Mr. ESCH. No; that is in another section.

Mr. GANS. Page 8, section 11, line 16. Possibly that provision that you last referred to on page 14 might be rendered more specific.

Mr. ESCH. I think it ought to be. There is a little confusion, a little doubt in my mind as to whether you intended to cover that in your \$200,000,000.

Mr. PARKER of New Jersey. "All expenditures contemplated by this act the President is hereby empowered," would be a great deal better, because you have limited it to "2 and 3 of section 2 hereof."

Mr. ESCH. Yes; it is.

The CHAIRMAN. Well, there is no controversy about the purpose of what we want.

Mr. PARKER of New Jersey. It wants to cover all purposes.

Mr. ESCH. Now, the provision here where at the end of the time, whether it be five years or less, the surplus or excess cost of making the installations shall be remitted to the lessee, provided he has complied with all these regulations in the management of the plant.

Mr. GANS. That is on page 6.

Mr. ESCH. Yes.

Mr. GANS. Subdivision 3 of section 2, page 6.

Mr. ESCH. That is, the excess will be waived, "and to provide by agreement for the manner of determining such costs and values by arbitration or otherwise." I was wondering whether the war-tax bill that we are now considering would have any relation to that, as shown in section 214 of the bill, subsection 9, where it says: "In the case of buildings, machinery, equipment, or other facilities constructed, erected, installed, or acquired on or after April 6, 1917, for the production of articles contributing to the prosecution of the present war, there may be allowed a reasonable deduction for the amortization of such part of the cost of such facilities as has been borne by the taxpayer, but not again including amounts otherwise allowed under this title for depreciation, exhaustion, or wear and tear"—and not to exceed, I think, 25 per cent. "In no case shall the deduction allowed under this paragraph exceed 25 per cent of the taxpayer's net income, as computed without the benefits of this paragraph or paragraph 11."

Mr. GANS. That is merely a provision for allowing for depreciation, isn't it, in the tax bill? I am not familiar with it.

Mr. ESCH. Allowing for amortization, because these industries, you see, have grown so enormously and the investment cost therein has increased so largely for a temporary purpose that in taxation the Government is going to allow them amortization to the extent of 25 per cent, if I remember rightly, of that income. Would that provision have any relation to this paragraph 6 in your bill, where we remit that excess of cost to the lessee?

Mr. GANS. I think it would probably work this way—and I am thinking aloud now on something that comes to me without opportunity for mature thought.

Mr. ESCH. You might give your views on it—not now, but when you revise your minutes.

Mr. GANS. My general impression would be at the moment that with a provision of this sort a corporation that was operating under a contract of the sort provided for in section 2, subdivision 3, of this emergency power bill couldn't claim the right to make the deduction for the amortization provided in that section of the tax bill, because the loss to be amortized would be absorbed by the Government under the provisions of the contract.

Mr. ESCH. In other words, he couldn't claim the benefit of both acts.

Mr. GANS. Precisely so, sir. And he wouldn't be incurring any depreciation of value that required to be amortized as an excess-war cost, because that depreciation of value would fall not on him but on the Government through the provisions of this act.

Mr. ESCH. You mean in the pending bill.

Mr. GANS. Through the provisions of this emergency power bill. If advances were made under this section that we are now discussing, the operator of the plant wouldn't be incurring any loss on plant through the difference between cost and value at the expiration of the war that required to be amortized, because that loss would be absorbed by the Government under the agreement entered into pursuant to this section 3. Therefore, he couldn't claim any deduction for tax purposes. That is my thought.

Mr. ESCH. Well, my idea in bringing it up was that if this becomes a law about the same time as the new tax bill, there ought to be harmony between the two provisions.

Mr. GANS. The problems, it seems to me—if I may discuss it off-hand—are somewhat different. For tax purposes one is privileged to act somewhat arbitrarily in determining what allowances shall be made or shall not be made. Here in the particular provision of the emergency power bill which we are discussing we are trying to arrive at a method of financing which will enable the private plants to be extended as far as possible, considering the financial possibilities, the possibilities of getting funds at legitimate rates. And so it doesn't seem to me that the sort of limitation that is placed upon the amount of depreciation that may be allowed as a deduction from income, which is quite appropriate in a tax measure, ought to be included in a measure of this sort; because here it is a matter that has to be adjusted according to the exigencies of each particular situation, by a contract made on behalf of the Government on the one side and the

corporation on the other. In some locality, conceivably, the difference between the war cost and the value of the property at the end of the war may be very slight. The growth of the community and the demands of the community may be such at the end of the war that the value of the property will equal its war cost. In other places where the installation has been solely by reason of the war needs and where the plants have been created in localities that are not going to grow, the difference between the cost of the installation and the value after the war may be very great, and it is one of those things that can be determined only by actual experience. Therefore, it seems to me that in order to make this provision workable it is necessary to leave the agreement to provide that whatever that loss proves to be may be absorbed by the Government.

Mr. ESCH. That is all the questions I have.

The CHAIRMAN. Mr. Gans, we are very much obliged to you. We may want you or Dr. Maltby or some others to come up here at any time while we are considering the bill. There is no contention, as I understand, about the purposes of the bill, but only the question of trying to get the legislation in such shape as will accomplish the object and purpose, and we may want you to come up at any time. I suppose you can be here?

Mr. GANS. I am at your service at any time.

Mr. PARKER of New Jersey. Wouldn't it be well that your proposed amendments be printed with this hearing?

The CHAIRMAN. Well, they are what I would call minor amendments.

Mr. PARKER of New Jersey. But wouldn't it be worth while to print them in this hearing?

Mr. GANS. I can get them up and submit them. I can submit the memorandum.

Mr. PARKER of New Jersey. Why not put them right in the hearing with Mr. Gans's testimony?

Mr. ESCH. Then we will have a chance to study them all together.

The CHAIRMAN. Yes; we will put them in the hearing.

Mr. ESCH. If Mr. Gans's examination suggests to him any amendments, he can insert them at the close of his testimony when he revises.

Mr. GANS. I haven't at the moment any amendments formulated, except those that we have formulated here together, and the one suggestion that I made that I would like to formulate, limiting to some extent the authority to acquire municipal power plants.

(Whereupon, at 12 o'clock noon, the committee adjourned.)

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COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
HOUSE OF REPRESENTATIVES,  
*Monday, September 16, 1918.*

The committee met at 11 o'clock a. m., Hon. Thetus W. Sims (chairman) presiding.

The CHAIRMAN. The committee will come to order. Now, gentlemen of the committee, Dr. Garfield will make a statement this morning concerning the bill, or the objects and purposes of it.

Dr. Garfield, you can make just such a statement as you think advisable, and members of the committee will interrogate you after you have finished it.

**STATEMENT OF DR. H. A. GARFIELD, FUEL ADMINISTRATOR.**

Dr. GARFIELD. Mr. Chairman, the bill appeals to me as one which ought to be enacted into law for several reasons. I take it that that is what you wish from me?

The CHAIRMAN. Yes; give the reasons why we ought to have this legislation?

Dr. GARFIELD. First, an adequate supply of power is essential to maintain the full and reliable production of coal. There are several sections of the country where the coal supply is of particular importance, those sections being especially the regions furnishing the by-product coal, which is essential to steel making, and without which the whole war program must halt. In all of the regions where the central power plant has been introduced, a difficulty has arisen because of the fact that the overcrowding—the overloading rather—of the central plant by reason of the large increase in requirements due to the war has resulted sometimes in a break-down of the plant. At other times, in a failure to furnish the necessary power for continuous operation. Of course, the first inquiry is, "Why don't the companies involved increase their plants?" That would seem to be good business. The chief reason why they do not, so I am informed, is that the financing of the war by the Government made it virtually impossible to raise the necessary amount of capital at the present time.

Now, the regions where there is the greatest need are in general these: First, in western and central Pennsylvania; second, the eastern Ohio coal fields; third, the central Illinois coal fields; fourth, the western Virginia coal fields; fifth, the eastern Kentucky coal fields.

Not all of those fields are producing by-product coal as a total or, perhaps, even in the majority of the tonnage, but it is coal including by-product coal, all of it necessary for the manufacture of munitions of war; and, as you readily appreciate, in those same regions the war manufacturing plants are largely established.

Now, a second point that impresses me with reference to this legislation is that adequate power systems are essential to the economic use of coal for power service to industrial undertakings. I have asked Mr. Stuart, of our conservation department, an engineer, to come with me, because he has exact knowledge that I think will be of advantage to you, and to explain some charts which we have brought illustrating the saving.

In a general way, there is a saving in the cost of operation of something like two and a half times by the installation of these central plants, but I take it that your committee is not particularly interested in that, inasmuch as that saving comes primarily to the mining companies that utilize the central power, instead of making their own power. You are interested particularly, as we are, in the amount of coal saved, and it is from two to four times in quantity. Indeed, in the anthracite region, where the situation is somewhat peculiar, we have figures that enable us to speak, not as from a

mere estimate, but with much more accuracy than that. There is in that region a saving of nine times the quantity of coal. At a time like this, when we are so pressed for additional coal, that saving is of the utmost importance; and it is that item particularly which leads me to be very glad of an opportunity to state to you gentlemen how this bill impresses me.

The CHAIRMAN. You mean utilizing the coal in these large stations would result in a large economy of coal amounting to the figures you have just mentioned?

Dr. GARFIELD. Yes. In regard to this anthracite illustration, to mine 90,000,000 tons of anthracite coal requires in the isolated plant 9,000,000 tons of coal which must be burned up at the mines, and it is estimated—I say it is better than an estimate, because it is in part based upon experience—that, if they were able to utilize power from a central plant for their mines only 1,000,000 tons of coal would be used in producing 90,000,000 tons.

The CHAIRMAN. By the use of one power plant instead of a separate power plant at each mine?

Dr. GARFIELD. Yes. Now, I happen to know from experience—I do not know that you care to have this for the record, but I can state it to you, and you can use as much of it as you care to—I know personally of one plant, a plant in which I have an interest, in which the saving is four times. That is to say, one-fourth of the amount of coal is consumed in giving us the current that was formerly used when we ran our own plant.

The CHAIRMAN. And manufactured your own current?

Dr. GARFIELD. Yes; manufactured our own current. For 15 years we manufactured our own current, and a year or two ago we began putting in a central plant connection. It cost the company a good deal of money, but it was worth doing, because of the saving in cost. As I say, we are not interested here in that. That was a pure economy for that company, but the fact that in actual use we are consuming through the central plant one-quarter of the amount of coal that we were consuming in our isolated plant to get the same current result is the important item.

The difficulty at the present time is that with the overload now on these plants, due to war industries, there are breakdowns that curtail the coal production. A good many months ago I had a call from the manager of a plant near Charleston, W. Va., the Virginian Co., which supplies a large number of the by-product coal companies. That plant was in danger at any moment of giving way. It hadn't any reserve. It had an order in with the General Electric for a new turbine, I think it was—at any rate, some important piece of machinery—but owing to the press of war orders they could not get it. It was necessary to do something to get additional funds so as to put in even more than was ordered and to get priorities that would enable the company, the Virginian, to get possession as quickly as possible of this additional machinery. At last the War Department took the matter up and made an arrangement with the company that resulted in its getting the additional equipment.

I do not know that there is more to be said than perhaps this, that there are two ways of economizing, looked at from the fuel standpoint. One is to build a central power plant, or where, as in some

instances, it is already built, enlarge the plant at the point of production—namely, at the mine. The other is to erect a central power plant at a point remote from the mines, but in the center of a manufacturing district. I imagine that it is not necessary for me to inform you that the current can be carried economically for a limited distance only. Mr. Stuart will be able to tell you accurately the distance. In a place like eastern Ohio, or in the Pennsylvania fields, the central plants can be most economically set up in the midst of the coal mining region.

There is the shortest coal haul. The manufacturing district lies near at hand and can be economically reached by the current. On the other hand, where no coal is produced near a manufacturing district the coal should be brought to a central point; central, that is, to the manufacturing district, and a central power plant there established or enlarged, as the case may be, to furnish the current. The location of such a plant would be of importance. It should be so located that it could receive its coal by transportation through the less congested districts; in New England, for example, by barge out of the New York ports, so as to avoid both the railroad and the open sea haul.

That, I think, Mr. Chairman, is all that I can say to advantage in regard to this matter.

THE CHAIRMAN. Looking at it from the standpoint of saving coal I suppose one of the chief purposes of your statement is to show, and if I get it correctly it would result in a great saving of coal to have as few power-manufacturing plants depending on coal as possible, and distribute the current or power rather than to distribute coal to different manufactories and produce the current at the manufactory; in other words, combining all current production in one central plant results in a great economy in the use of coal, and then results as an economy to the manufacturer in receiving the current. Does it not also result in reducing the coal tonnage over the railroads that would serve these essential plants? It takes less coal, of course, and less car space and motive power to move it. I suppose that is one essential consideration?

DR. GARFIELD. Yes; I didn't dwell on that, because I assumed that you would have that from the transportation companies. This chart, which I shall be very glad to leave with you, shows the saving in many ways, including the saving in machinery—you appreciate the type of chart that it is. [Indicating.] Here is the 480,000 kilowatt machine; that would be at the central station. This, double its size, would represent the machines necessary if you were running isolated plants. These coal piles represent the saving there of from one to four times. This, in a sense, you are not interested in, because that is the capital side of it. Capital is saved, but here trackage is saved; and that, of course, is very important from a transportation point of view. And here in the matter of freight cars—that little car and this big one would represent the saving in car supply. That saving is as 4,250 to 85,000—a very great saving. And in locomotives it is as 80 is to 1,700. Here is the difference in the question of haul.

Then a very important item which has not been mentioned is the man power. In other words, the number of operatives required at the central station would be 2,000 men as against 8,000 men required in the isolated station.

The CHAIRMAN. Now, the further important fact is, as I get it from your testimony, that it would be very difficult to finance the construction of these large central stations without Government help?

Dr. GARFIELD. Yes.

The CHAIRMAN. And that the cost of construction, labor, and material, at this time, would be so great that there would have to be a loss upon it to the owner of the plant after the war?

Dr. GARFIELD. Yes.

The CHAIRMAN. And that nothing much less than the Government can make a success of such construction at such a time as this, and with a view of sharing part of the war loss, or so much of it as may be ascertained would be just between the Government and the manufacturer to assist them. I suppose that is another matter?

Dr. GARFIELD. Yes; it is the whole question of amortization, which can not be carried on successfully except under some Government regulation.

The CHAIRMAN. And Government assistance in building the plant.

Dr. GARFIELD. Yes.

Mr. ESCH. Is it a fact that some of the power plants for the development of electric energy in the coal regions are supplied from the culm banks?

Dr. GARFIELD. I assume that it is, but I do not know. I assume that it is. Culm bank coal in the anthracite region is just as good coal as any other coal.

Mr. ESCH. Well, the testimony before this committee was that the Hauto Electric Power Co., which develops 28,000 horsepower, gets its supply from culm banks. The question in my mind would be if coal from the culm bank is to be the fuel for the central plant, you might have to haul culm from one bank to the heating plant and thus cause additional cost.

Dr. GARFIELD. I think that it is as broad as it is long. The notion I had some months ago was that there ought to be a different price for the culm bank coal. I am now referring to anthracite. I don't know whether the company you mention is in the anthracite region.

Mr. ESCH. Yes; right in the anthracite region.

Dr. GARFIELD. I had an idea that, the culm banks being recovered, the process was less expensive and that therefore, we ought certainly to insist on a less price. I submitted this question to the engineers and the accountants, both my engineers and the accountants over at the Federal Trade Commission, and I was advised that it would be unwise to try to make a different price, because of the fact that, while it was true that they could get the coal out of the culm banks at far less than the expense of mining fresh coal, by the time we had erected machinery for the special process of washing, and had incurred extra expense incident to this work, the difference would really be absorbed. the cost would be included properly in the cost of the mining of fresh coal. Now, it comes to this, that, if it is just as well and a shorter haul to burn your fresh coal at the central plant, they would do it and sell the culm-bank coal along with their other coal. If culm bank is right near at hand, they would use up the culm bank undoubtedly. But from the standpoint of the com-

pany, I don't imagine that it would make a great deal of difference which they did, as affecting their profits.

Mr. ESCH. Would a central electric power plant give more continuous service to many different consumers or users and give it more uninterruptedly than individual plants?

Dr. GARFIELD. That is one of the chief arguments for putting in the central plant; yes, from the standpoint of the operators.

Mr. ESCH. Is that due to the fact that the individual plants are usually small and have no duplicate equipment of boilers or generators?

Dr. GARFIELD. Yes.

Mr. ESCH. While your central heating plant would be built with a view to meeting contingencies and thus always have a surplus of units?

Dr. GARFIELD. Yes. The difficulty just now is that they have been reduced to the place of the isolated plant because of the heavy load put on them due to the war, and that they have used up even their reserves; so they have got to build more. But your principle is right.

Mr. ESCH. Will it be possible to equalize the load of a central plant in war industry by extending the period of use through the 24-hour period?

Dr. GARFIELD. Yes; but not without difficulty, because of the prejudice of the miner in favor of working certain rather established hours. But by working two shifts of eight hours each there could be a distribution of the load.

Mr. ESCH. Is that found to be impossible, to make two shifts?

Dr. GARFIELD. No; we did that for a period. Mr. Stuart, do you know whether it is still going on at the Virginian plant?

Mr. CHARLES E. STUART. No; it is not; and it was very unsatisfactory, though it was an expedient.

Dr. GARFIELD. We sent out really a request—rather than an order—to the operators down there to relieve the load on the Virginian plant by this plan of two shifts. The prejudice of the men against that is quite obvious.

Mr. ESCH. And that might exist in other sections?

Dr. GARFIELD. Yes. Theoretically it is perfectly sound, and it ought to be done.

Mr. ESCH. That is why I propounded the question as to why it could not be done. I was not reckoning on this prejudice.

Dr. GARFIELD. I think the prejudice can be overcome if it is presented in the right way; that is, to a considerable extent in the war period. But speaking generally, the prejudice is deep-seated. The miners like to get at their work early and get through early. They don't like the idea of an afternoon shift.

Mr. STEPHENS. Doctor, does your plan or this bill contemplate taking or uniting the present existing plants in an industrial center? For example, suppose in a certain industrial center there would be 50 or 60 plants now in operation. Some of those plants use all the power they have, others do not, and, perhaps, many only use their maximum capacity a few hours a day. Now, is it contemplated that the power produced by all of these isolated plants will be run into one line and furnish a reservoir of power that can be distributed where it is needed and thereby use the maximum power of the dis-



trict instead of, as at the present moment, only using a portion of it in certain plants and leaving others overloaded?

Dr. GARFIELD. I should like Mr. Stuart at the proper time to answer that. I have heard that discussed as one of the ways. It lies in my mind that the engineers answer it differently in different places, depending upon conditions.

Mr. STEPHENS. You made in the beginning of your remarks the statement in regard to some of these fields producing by-product coal and others not. I don't know whether I understand what you mean by that "by-product" coal. Do you mean that some coals have by-products, such as gas, etc., and others do not?

Dr. GARFIELD. Yes. By-product coal is, I suppose, a technically correct term, but it means coal suitable to go to the by-product coking furnaces, and is, therefore, coal greatly in demand, because out of it come not only valuable gases, but toluol and various acids and oils used in making explosives.

Mr. STEPHENS. As a rule, anthracite coal does not have much by-product, does it?

Dr. GARFIELD. I think not. Does it, Mr. Stuart?

Mr. CHARLES E. STUART. No.

Mr. STEPHENS. Do you anticipate, Doctor, that these central plants can be constructed and put into operation in time to serve a real purpose before the war closes, if it should close in another year?

Dr. GARFIELD. I should suppose that in a good many instances, certainly, plants could be enlarged. Whether new plants could be put into operation to accomplish the results before the close of the war, again, I should like Mr. Stuart to state to you.

The CHAIRMAN. Well, in the first place, nobody knows whether it will close in a year or not.

Mr. STEPHENS. No; of course not.

Dr. GARFIELD. Unhappily, we can not tell.

The CHAIRMAN. We can't wait till the end of the year to tell.

Mr. STEPHENS. Well, even though they wouldn't be installed in that reasonable length of time, the use of it during the war wouldn't end in a year? These plants will still serve a great economic purpose, I should judge, without any regard to the war?

Dr. GARFIELD. Oh, yes; without any regard to the war.

Mr. MONTAGUE. Mr. Stephens has somewhat anticipated the questions I wanted to ask.

I understand fundamentally you think that it is cheaper to transport power than it is to transport coal out of which power is to be generated?

Dr. GARFIELD. Within a limited region, 150 miles possibly. I am not sure of the distance.

Mr. MONTAGUE. And you want to transport this power by centralizing the points of distribution, or the plants of distribution?

Dr. GARFIELD. Yes.

Mr. MONTAGUE. And your statement is that that centralization can be accomplished by two methods: Coordinating certain existing plants, or establishing a Government plant. Do I catch you correctly when I make that statement?

Dr. GARFIELD. Yes; if I understand correctly what you mean by a "Government" plant.

Mr. MONTAGUE. I mean by the Government's building and erecting its plant—its own plant.

Dr. GARFIELD. It might either be built and directed by the Government as a whole, or it might be better to arrange for its direction.

Mr. MONTAGUE. And the Government would loan the money?

Dr. GARFIELD. Yes. The bill is left open, I understand it, in that regard.

Mr. MONTAGUE. It would result in the same thing.

Dr. GARFIELD. Yes; that is my understanding.

Mr. MONTAGUE. I mean done by the Government, by the Government either establishing it and aiding it in its establishment, or putting it up itself. Now, assuming that the Government is going to erect these centralized plants, or that the Government is to loan money by which these plants are to be centralized, how long a time do you think that will consume?

Dr. GARFIELD. Well, that is a technical question, Governor. I shouldn't undertake to be wise enough to answer that question.

Mr. MONTAGUE. Are you viewing this, Dr. Garfield, from the standpoint of a permanent economic policy, or a policy to subserve the uses of this war?

Dr. GARFIELD. The former. It is a permanent economic policy.

Mr. MONTAGUE. I mean a permanent economic policy as related to Government intervention and Government supervision, or Government operation?

Dr. GARFIELD. Oh, no; it is a permanently economic policy outside of that question, whether the Government runs it or not. For a long time I have been convinced that there should be that kind of economy. I may say that, going back to 1901 and 1902, when I was actively interested in the projection of a coal enterprise in southeastern Ohio, it was a thought with me then that we ought to consider the advisability of enlarging our enterprise and of putting a plant in at the mine and using our own coal that way and selling power rather than coal, because I believe in the economic principle of it.

Mr. MONTAGUE. The point of view with myself, and maybe some others of the committee, has been that if this is to be a permanent business in which the Government enters, then time is not the essence of its merits or necessities; but if it is to be for a military purpose alone, then the question of how long the Government should engage in this policy after the war is over would be a question, perhaps, to be determined by legislation. That is my reason for asking you how long.

Dr. GARFIELD. I may say that I have viewed this wholly outside of the question of war necessity. My thought is, what are the merits of it as a permanent economic policy?

Mr. MONTAGUE. I don't mean as a permanent economic policy, if it is a wise thing, but the question with me is, has the Government the right, the constitutional right, to engage in these private businesses and conduct them after this war is over as a peace policy?

Dr. GARFIELD. I shouldn't undertake to answer that, Governor, without more careful attention to the question.

Mr. MONTAGUE. I will not endeavor to elicit an answer from you, Doctor. I was just trying to unburden my own mind, that you may see the object in my asking the question.

Dr. GARFIELD. I wish to say, though, that there would be no doubt in my mind—and I venture to say none in yours—that if the Government is authorized in the conduct of the war to take such steps as will expedite the production of coal, and if you gentlemen conclude that it will expedite the production of coal—

Mr. MONTAGUE (interposing). Either expedite the production of coal or power or save the production of coal.

Dr. GARFIELD. Of course, I used the term "expedite" to include the two. I have approached the question in studying this bill from exactly that point of view. I have brushed aside everything else and have said to myself, "that piece of proposed legislation appeals to me, because I believe it will accomplish what we are after." If the war comes to an end quickly the plants may not yet be in operation; but I have proceeded—as I take it you, gentlemen, in enacting the Lever bill meant me to proceed, or meant the person charged with the responsibility to proceed—on the assumption that we must get ready as if the war were to be long continued, devoutly hoping that it will end soon.

Mr. MONTAGUE. That is the reason I was anxious to know your answer to Mr. Stephen's question—how long it would take to co-ordinate the plants and essentials, to organize them as central plants for the distribution of power; or if it had to be done by the establishment and construction of a new plant, how long it would take to do that. You said Mr. Stuart would answer that.

Dr. GARFIELD. I should be very glad to have Mr. Stuart answer that. My understanding is that it would be worth while, without knowing the details.

Mr. HAMILTON. Doctor, you are treating this now as a purely war emergency proposition?

Dr. GARFIELD. Yes.

Mr. HAMILTON. And I assume from some testimony that has been given before the committee heretofore that certain corporations have large war orders which with their present power they are unable to fill within a time that would make the product available for war purposes—at such a time as the Government would desire it; contracts have already been entered into and they have not the power to finish the contracts within the time that the Government would like to have them finished. Is that true?

Dr. GARFIELD. Speaking generally I so understand it, although I have not in mind specific contracts.

Mr. HAMILTON. Well, I gathered that from some testimony that has been given here.

Now, take a large plant engaged in the production of some war necessity, just how will the Government proceed in assisting that plant to increase its power? Take that just to illustrate the situation.

Dr. GARFIELD. I had thought that the bill expressed the several ways that might be employed.

Mr. HAMILTON. I am talking now about the practical proposition. Here is a plant with orders, or which is in position to receive orders. It is an emergency proposition. They want to get this product out as soon as possible. What will the Government do? Just how will it practically work out in the briefest possible time?

Dr. GARFIELD. Do you refer to a power plant?

Mr. HAMILTON. A power plant or, as I had in mind, a manufacturing plant which is manufacturing some war necessity. I don't care which you use, but I had in mind the manufacturing plant engaged in the manufacture of war necessities.

Dr. GARFIELD. May I change the illustration to answer you in a practical way? The Virginian plant, which is a central power plant, furnishing, say, 90 or 95 per cent of the mines in the territory in and about Charleston—mines that produce the byproduct coal—came to me, to see if I could help them to secure this additional machinery which they were obliged to have. Part of their difficulty was financial. Part of it was lack of sufficient orders to get the machinery hastened and brought down to them.

Mr. HAMILTON. Now, what is this Virginian plant doing?

Dr. GARFIELD. It is a central power plant.

Mr. HAMILTON. Its business then is to furnish power?

Dr. GARFIELD. To furnish power, yes.

Mr. HAMILTON. And other plants use it in the manufacture of war materials?

Dr. GARFIELD. Chiefly, as it happens, on account of its location it furnishes power to run the machinery—cutting machinery and all the rest of it—in the mines around about there. It furnishes power also to manufacturing plants.

Mr. MONTAGUE. Would it interrupt you to know whether that Virginia plant is operated by power or coal?

Mr. GARFIELD. By coal. The Appalachian, not far away, is operated by, I believe, both—or at least it has the opportunity to be operated by water. The Virginian is a plant operated by coal, and it might well be used in illustration of the saving in coal that I spoke of a while ago. Now they came to us, and not only did I ask Mr. Stuart and his associates to figure on what ought to be done by the Government—what could be done—but I turned it over to the council for the Fuel Administration; and we went so far as to work out a contract, and what we were going to do was this—if it seemed wise to do it. We were going either to use a fund that is included in the Lever Act or else ask the President for the money—but it would in any event be the Government's money—a million dollars to be turned over to the plant for the purchase of this new machinery.

Mr. HAMILTON. How would that be secured?

Dr. GARFIELD. That would be secured by the Government's having a lien on the machinery, virtually owning it until such time as the Government would be settled with. In addition to that, we insisted that they must make some further provision in the way of securing the Government's interests. My own notion was in the beginning—and I insisted upon that—that the bond holders should all consent to allow this lien of the Government to be on lines very much like receiver's certificates, which are issued in order that a road may be kept a going concern during a receivership.

Mr. HAMILTON. Otherwise the Government might have security on what might ultimately, or rather soon, become junk, if it was simply machinery?

Dr. GARFIELD. I thought that was likely to be the way. The difficulty, the practical difficulty, was so great that the managers said that they did not wish to do this; and eventually they solved the problem in another way, because they were able to arrange with the

War Department, in conjunction with its powder plant, for current that gave the Government a direct use. This took the place, you might say, of a further lien.

Mr. HAMILTON. Well, now, suppose this bill should become a law about the middle of October. You are interested—we are interested, all of us, of course—in getting these, broadly speaking, war necessities out as rapidly as possible, and I had in mind a large manufacturing corporation the facilities of which were inadequate to produce, to turn out the orders already received. Winter is coming on. There is a shortage of coal, let us assume—I assume there is, from the complaints which I receive from my district.

Dr. GARFIELD. In a sense there is. There is more coal produced than ever before, but the demand is still greater.

Mr. HAMILTON. Now, what we want is speed. I wanted from you some practical illustration of how a corporation could receive immediate assistance and how long it would take that corporation, having received assurances from the Government that it would receive money, to add to its plant sufficient power to make this a practical help rather than a theoretical help. I am not talking about projecting the think into the future. This is a war emergency proposition and I want to find out what relief we will get during the war.

Dr. GARFIELD. Well, I agree with you, that we must look at it from the standpoint of war emergency and what relief we shall get. Mr. Stuart will be able to tell you, I think, rather particularly, how long it will take to get the results of the operation.

Mr. HAMILTON. Very well.

Dr. GARFIELD. I have preferred that he should answer this question, because as an engineer he knows, and I have to learn from him.

Mr. HAMILTON. I am not skilled in matters of that kind. I am seeking information from some one who is skilled.

The CHAIRMAN. Mr. Stuart is going to follow Dr. Garfield.

Mr. HAMILTON. Oh, very well.

Dr. GARFIELD. I wish to say this, apropos of some of the remarks that you have been making. One difficulty that we have has been this: When the less essential industries were told that they couldn't have coal, at the outset they gave up coal—or some of them did—and went over to the use of power, where they could, which was an indirect use of coal; and without some arrangement by which we can control power companies also, we were in danger of having our coal used indirectly, and of not being able to curtail where we ought to curtail. The regulations which would be set up governing power companies, the Government having control of them, would, of course, prevent any switching by less essential industries to power, and thereby using not so much coal, but still, coal.

Mr. HAMILTON. I think that is all I care to ask.

Mr. PARKER of New Jersey. Dr. Garfield, you spoke of the great value for war purposes of the by-products of coal, which I believe are gas and various coal products, toluol, etc., which the Germans have used first in dyeing and then afterwards in high explosives—and these are the greatest. I understand that every gas works in a city that makes gas makes at least some of these by-products. In my city those gas works—do you say yes to that?

Dr. GARFIELD. Yes.

Mr. PARKER of New Jersey. In my city those gas works are owned and operated by a big electric light and power company. That is not universal, is it? Some of the gas works are separate from the control of the light and power companies?

Dr. GARFIELD. Yes.

Mr. PARKER of New Jersey. Another branch of manufacture that can or does make these by-products are the great coke furnaces of Pennsylvania. They used to take only the coke and let all the gas and by-products go. A great many of them are now saving the by-products, are they not?

Dr. GARFIELD. They are going over as rapidly as possible from the beehive to the by-product ovens.

Mr. PARKER of New Jersey. That is to retorts or something like that?

Dr. GARFIELD. Yes. The beehive oven did not save the by-products.

Mr. PARKER of New Jersey. And we wasted an enormous quantity in that way?

Dr. GARFIELD. Yes.

Mr. PARKER of New Jersey. Those ovens are very seldom owned by power companies. Isn't that so?

Dr. GARFIELD. Yes.

Mr. PARKER of New Jersey. Not at all?

Dr. GARFIELD. I am not able to say "not at all," but I think it would be approximately true.

Mr. PARKER of New Jersey. This bill, I notice, provides for the use by the Government—and the acquisition in various ways and aiding—of power companies, but not of these by-product companies, except where they are operated in connection with a power company. Do you expect or had you any idea of taking charge of this manufacture of by-products apart from power or only in connection with power?

Dr. GARFIELD. I can not say that I have carried the thought through as far as that, Judge Parker.

Mr. PARKER of New Jersey. There is nothing in the bill of that sort. The bill only speaks of constructing power plants by the Government which, in connection therewith, would afford these by-products; but in a subsequent section, at the bottom of page 6, it provides generally as to plants for better utilizing the gas, power, or by-products generated by them, as if they recognized that power plants now own gas works and coal-product works. Now, I only point that out to you because if the improvement of the by-product works is to be a governmental concern and not merely the development of central power, leaving the by-products to the separate manufacturer, it would be a different thing than if the Government were going to try and take control of some of these very large beehive ovens in order to transform them. You don't expect that the Government will do that itself, but will leave that to private manufacturers. Isn't that so?

Dr. GARFIELD. Yes; I had supposed so.

Mr. PARKER of New Jersey. And I had, too. I only wanted to know if I comprehended the bill exactly. The bill, then, does not intend to put the Government's hands on that manufacture, except where it comes as an incident of power plants of which they have control?

Dr. GARFIELD. That is the understanding.

Mr. PARKER of New Jersey. That is all I have to ask.

Mr. SNOOK. Dr. Garfield, I understand you to say that you have had some practical experience in mining; that you were engaged in mining?

Dr. GARFIELD. I ought not to emphasize that, because I was on the law side of it, as syndicate manager.

Mr. SNOOK. We are not all miners and we don't all understand the business, and I would like to have you tell us some of the uses that you make out of this power in practical mining. What is it used for? How do you use it?

Dr. GARFIELD. The central power plant furnishes the current to an individual mine—to many individual mines. That current is used for operating the fans that ventilate the mine; it is used for operating all of the machinery about the mine—for operating, where it is a shaft mine, the electrical hoists.

Mr. SNOOK. Takes the place of the old mule?

Dr. GARFIELD. It takes the place of the mule in running the cars in and out, and it takes the place of the pick miner, who with his pick dug the coal out, and now operates the cutting machine.

Mr. SNOOK. That is, for blasting?

Dr. GARFIELD. No; it is before you get to the blasting process. There is an undercutting machine which has an endless belt of knives that run in such fashion that the piece of machinery is advanced at the bottom of a block of coal. We will say the seam is a 5-foot seam. You operate this machinery by running this undercutting machine under that seam. The cutter is going around all the time, and you cut in as deep as the miner finds it necessary. That is withdrawn, and then the drills are run by electricity above for the powder blast, and the powder blast is put in, and when the blast is let off it breaks down a huge block of coal. Now, the old way, the pick-mining way, was for the miner to go in there and attack the face of this coal and dig it off piece by piece, and then this coal was carried out.

Mr. SNOOK. So that the mines equipped with this power are able to mine coal at a great deal less expense than the old way?

Dr. GARFIELD. It is less expense but much greater speed. It is because of the greater speed that the overhead is reduced.

Mr. SNOOK. Well, are there a good many mines yet that have not been able, on account of the scarcity of this power, to equip themselves with this machinery?

Dr. GARFIELD. Yes; a great many mines, but not a great amount of tonnage.

Mr. SNOOK. Well, was it in your mind that if we increase these power plants and build new ones, it would enable them to take on new mines and furnish them with this power?

Dr. GARFIELD. Oh, yes; mines could equip themselves that have not done so yet.

Mr. SNOOK. And you think that if this authority is given and these power plants are put in that you can increase the production of coal a great deal in the near future? Do you think it is practical to increase the production in that way?

Dr. GARFIELD. Yes; I do.

Mr. SNOOK. You look for good results?

Dr. GARFIELD. Oh, yes; I should not advocate the bill as a war measure if I could not see within a year results that would be important; and they would begin at once, because some territories are operated by the central plant now, and every inch of progress in putting in and connecting up a new extension is that much more coal as a result.

Mr. SNOOK. You think you can procure the machinery and things that are needed to build these plants?

Dr. GARFIELD. I suppose you should ask Mr. Baruch about that; but I know that Mr. Baruch, with whom I have conferred about this matter, will expedite the machinery as much as possible.

Mr. ESCH. Just one question along the line of Judge Snook's inquiry. Would the use of electric current in the lighting of the mine greatly add to the security of the miners?

Dr. GARFIELD. I don't know about that. I presume that it would. I should suppose, without question, that it would.

Mr. ESCH. With the great mortality rate among coal miners, especially in the bituminous field, anything that would promote their safety and welfare ought to figure in this problem.

Dr. GARFIELD. Well, I should answer that as a layman. I should suppose clearly it would, because there is no open flame there.

The CHAIRMAN. We are very much obliged to you, Doctor, for the aid you have given the committee.

Mr. Stuart, if you will kindly return here at 10.30 o'clock to-morrow morning, we will be glad to have your statement in connection with what Dr. Garfield has told us.

(Whereupon, at 12 o'clock noon, the committee adjourned until 10.30 o'clock a. m. Tuesday, September 17, 1918.)





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# EMERGENCY POWER BILL

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BEFORE THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE  
OF THE HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

SECOND SESSION

ON

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SEPTEMBER 17, 1918

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## EMERGENCY POWER BILL.

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COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
HOUSE OF REPRESENTATIVES,  
*Tuesday, September 17, 1918.*

The committee met at 10.45 o'clock a. m., Thetus W. Sims (chairman) presiding.

The CHAIRMAN. Mr. Stuart, when you are ready, you will proceed. You, of course, were present with Dr. Garfield when he testified, and I suppose you now have a statement prepared that you will make first before you are interrogated, and when you are through the members of the committee may desire to ask you some questions.

### STATEMENT OF CHARLES E. STUART, CHIEF OF THE POWER SECTION OF THE UNITED STATES FUEL ADMINISTRATION AND POWER EXPERT FOR THE FUEL ADMINISTRATION.

Mr. STUART. Mr. Chairman, I have made a number of notes here, chiefly in reply to some of the questions that were raised yesterday. Those questions—a number of them—were referred, you will recall, by Dr. Garfield to myself, and I want to ask if those questions can be asked again, because they have a very important bearing on this entire subject from the standpoint of the Fuel Administration.

The CHAIRMAN. Have you in your notes there the questions?

Mr. STUART. I have not the questions, but the gentlemen who asked those questions are here.

The CHAIRMAN. I know, but they might not be able to remember just the way they asked them of Dr. Garfield, and his testimony is not here. Just read what you have on it, and that will suggest questions.

Mr. STUART. The notes that I have made chiefly have a bearing on the subject of the needs of the coal fields for help along the lines that are proposed in this bill. For instance, take the case of the Central Illinois Public Service Co. The demand on this plant has doubled within a period of eight months. As the result of insufficient water supply the fifty-odd mines on this plant were closed down nearly a month. The capacity of the plans is also insufficient to take care of the mining load. Until a radical improvement both with respect to their generating system and transmission system is made it will be impossible to supply all of the mines power and to give continuous service. These mines supply very largely by-product coal, and certain blast furnaces of the United States Steel Co. in Illinois have been closed down on account of a lack of a supply of by-product coal.

In the eastern Kentucky coal fields there has been a heavy loss of production for the same reason—or the same general reasons as stated above.

There are various improvements which can quickly be made to safeguard the service were the money available. Such improvements could be made within a period of three to six months.

In the coal fields of Colorado and Wyoming there has been a loss of production on account of power troubles. These troubles could be quickly remedied were it possible to finance the requirements. In using the word "quickly" I have reference to a period of from 3 to 6 months to give temporary relief, and possibly a greater period in which to make improvements of a broader character.

In the central Pennsylvania coal fields they are losing heavily in production on account of insufficient generating capacity and line trouble. The power company serving these fields has just canceled an order for a 10,000-kilowatt turbine in spite of the fact that this field now has insufficient generating capacity. The power company has effected this cancellation because they think they have no way of financing it.

I have here a letter from a group of mines in Ohio, the Jefferson Coal Co. This letter is from its president. In part he says: .

As Mr. Simpson, the general manager, wrote you, the mines were idle yesterday for lack of power.

The CHAIRMAN. Read the whole letter if you desire—that is, if it is all applicable to the subject.

Mr. STUART. Well, that covers the point. I want to explain to you that the mines of the Jefferson Coal Co. are in what is known as, broadly speaking, the Pittsburgh district, where there is a great deal of power trouble at the present time. I was at the mines of the Jefferson Coal Co. just about 3 weeks ago and they suffered a shutdown on that day which cost an output of about 5,000 tons of coal.

I have also here a letter from Mr. Honnold, the district representative of the United States Fuel Administration in central Illinois. Mr. Honnold called attention to this power bill. He raises a question as to whether there is any chance of this power bill getting through, and as to the chance of its getting through quickly. He refers to the fact that the mines of the central Illinois district are being seriously curtailed as a result of insufficient generating capacity.

In other words, Mr. Chairman, it is a case of—well, it is a case that the biggest coal producing districts of the country are suffering seriously from a shortage of power and of generating capacity, and on account of conditions which, were the money available, could be quickly remedied.

Now, here are several cases also bearing on the point: The Bethlehem Steel Co., of Bethlehem, Pa., on the electric system of the Lehigh Coal & Navigation Co., are short of power. To supply their requirements 25 per cent of the power for the cement companies in that district has been cut off. The Bethlehem Steel Co.'s requirements are increasing every day, and unless an increase in power can be supplied within six months some very important industries, like coal mines, will have to shut down on power to give the supply that

is needed. When you say "short of power" you mean reduced production. The alternative to shutting down coal mines, of course, is to shut down the steel plants. The immediate remedy in this case is the installation of additional boiler horsepower in the Hauto plant of the Lehigh Navigation & Electric Co., at an approximate cost of \$1,250,000. An increase can be made in from four to six months.

A very serious shortage exists—this is another case—around Newark, N. J., on the lines of the Public Service Electric Co. Such shortage can be partially remedied by taking power from New York to the extent of 20,000 horsepower, at an approximate expense of \$1,500 00. Such relief can be obtained in about four months and is greatly needed for very important war work.

The district supplied by the Mahoning & Shenango Railway & Lighting Co. from their station at Lowellsville, Ohio, is very short of power and has planned to install 20,000 horsepower additional. With the money available such an addition could be made ready for service by the 1st of May next, at an approximate cost of \$1,500,000. This company supplies many steel companies, which are very important for the war program.

The Pittsburgh and eastern Ohio district is very acutely short of power at the present time, and will be much more so during the year 1919.

The large power plant at Windsor, W. Va., can be increased so that 40,000 horsepower additional could be ready by about July 1 next, and 40,000 more by November 1 next, were the money available to go ahead immediately. Also a tie line between this place and Pittsburgh is required. The total approximate cost of such extension is \$9,000,000.

Those are simply a few of the typical cases. To illustrate further, I made a survey in what is known as the Pittsburgh district about three weeks ago, on account of the serious complaints that were coming in from the one hundred and fifty-odd operations receiving power in that district to the effect that they were not receiving continuity of service; and to the effect that they were forced to close—that power was cut off from two to four times a day for a period of from 10 to 15 minutes each time.

When mine power goes off the mine stops. The ventilation stops and the men leave the mine. In the first place, they are not allowed to stay in the mine. In the second place, no man will stay in a coal mine when the ventilation goes off. When the miners leave the mine they don't come back. The result has been a very heavy curtailment of production in the Pittsburgh district, where the bulk of the coal is by-product coal.

Now, the question was how that service interruption could be relieved. There were three alternatives. One, that of throwing everything possible on night service; second, that of closing a certain number of coal mines down; and, third, that of closing the steel mills down. To-day the limitation on the output of steel is by-product coal. By-product coal was being produced in that district, so actually in order to take care of that situation it was decided to shut down the steel mills for lack of power to go round. In other words, those mills which are making steel, all of which is used for our requirements on the other side, were shut down because of lack of power.

We have been warned by English engineers who have had an opportunity to observe what was coming—the situation has been understood here for the last year—the War Industries Board has been doing what it could to take care of the matter—we were warned by England that England's program was set back from 9 to 12 months by the fact that she went ahead and built up her plants for manufacturing war materials and failed to provide power to take care of those factories. We are to-day in exactly that same position. We are already in the position where there is a serious curtailment, as I have just cited, in the case of the Pittsburgh district, but the worst part of it is that this shortage is growing steadily and will really become the limitation on the output of our war material.

To give you an idea of what power shortage means, here is a graphic chart that was made to illustrate that situation in the Pittsburgh district. It was made by the Fuel Administration, working in conjunction with statisticians from the Westinghouse Co., the United States Steel, and the power companies. It shows, for instance, that an \$18,000,000 investment in central station power equipment and plant produces \$366,000,000 of corresponding manufactured products. It shows that a \$32,000,000 additional development in central station equipment will produce an additional \$452,000,000 worth of corresponding manufactured products.

Mr. ESCH. Per annum?

Mr. STUART. Per annum; yes, sir.

Mr. PARKER of New Jersey. This \$32,000,000 don't give you as much proportionately as the \$18,000,000—or do you mean to \$32,000,000?

Mr. STUART. No; an increase of \$32,000,000.

Mr. PARKER of New Jersey. Will give you only \$400,000,000 more, but you have got \$360,000,000 from \$18,000,000.

Mr. STUART. I can't give you the details of the reason for that, but that is probably very largely due to the increased cost in construction.

Mr. PARKER of New Jersey. Well, does the increased cost increase the cost of the products, too?

Mr. STUART. Yes.

Mr. PARKER of New Jersey. I don't see why that should come in that way. Your \$18,000,000 made \$20,000,000 of products for every \$1,000,000 in power, while your \$32,000,000 will only make about \$13,000,000—\$12,000,000 or \$13,000,000.

Mr. STUART. In order to use that \$32,000,000 to advantage we have probably got to—or rather we will have to—put in some very extensive transmission lines. We will be covering a larger area from the central generating points, and that would account for a considerable increased cost. That is all I have to say, Mr. Chairman.

The CHAIRMAN. Have you any questions, Mr. Esch?

Mr. ESCH. I have some questions suggested by your testimony. Did you say that there was a shortage in the Colorado field?

Mr. STUART. Yes, sir.

Mr. ESCH. I notice in the list of places where there was enormous supply, shortage and surplus supply, in Lieut. Stanley's testimony, that he lists Pueblo, Colo., as a place where they have a large power supply.

Mr. STUART. I am not referring to Pueblo. I am referring to the coal-mining district.

Mr. ESCH. Well, this is not very far from Pueblo.

Mr. STUART. Well, then, evidently it does not receive its power from Pueblo.

Mr. ESCH. Then you mentioned the Illinois field, did you not?

Mr. STUART. Yes, sir; the southern Illinois field.

Mr. ESCH. This same list indicates that there is a surplus of power in the Chicago district.

Mr. STUART. That is true.

Mr. ESCH. And also in the district of Davenport, including Moline, Rock Island, etc.

Mr. STUART. Yes, sir; all of which are outside of the district which I speak of.

Mr. ESCH. Which coal district did you have more particular reference to, the central, southern, or northern?

Mr. STUART. Southern Illinois. In fact, we have gone very carefully into the question of whether power could be brought into that district from one of the near-by centers where there is an available surplus, but the nearest point apparently is about 100 miles away.

Mr. ESCH. Is there any surplus of power at the Keokuk Dam?

Mr. STUART. Very little; none that we could call upon for this district.

Mr. ESCH. Well, they haven't installed all their units, have they?

Mr. STUART. No; they have not.

Mr. ESCH. Would they have power enough during the summer season to run all the units for which they have made installation?

Mr. STUART. This season, according to my understanding of the present generating capacity, takes up about all of the water they have. On the other hand, additional generating capacity, of course, in other seasons would add very greatly to the available capacity.

Mr. ESCH. You are familiar, of course, with the terms and provisions of the food and fuel bill, are you not—the act approved August 10, 1917, which really provided for the establishment of the Food and Fuel Administrations? Now, section 12 of that act reads as follows, in part:

That whenever the President shall find it necessary to secure an adequate supply of necessities for the support of the Army or the maintenance of the Navy, or for any other public use connected with the common defense, he is authorized to requisition and take over for use or operation by the Government any factory, packing house, oil pipe line, mine, or other plant or any part thereof, or in or through which any necessities are or may be manufactured, produced, prepared, or mined, and to operate the same.

Those are enormous powers. Aren't we duplicating some of those in the pending bill?

Mr. STUART. I have reference in the statements made to those centers in which there is a lack of capacity or a lack of equipment. It would do no good to take over the plants in those sections nor for the Government to operate them, because they are now being operated, as a general proposition, to the best advantage. For instance, in this southern Illinois coal field that I speak of we are actually administering the power to the coal mines in order to see that that power is most advantageously distributed. The power company has made no objection to doing that. We have had a man with that com-



pany telling them how to do it to the best advantage, and there is no trouble from that standpoint. But that does not solve the question, because what they need there is additional generating capacity and equipment.

Mr. ESCH. This act says:

or for any other public use connected with the common defense, he is authorized to requisition and take over for use or operation by the Government any factory, packing house, oil-pipe line, mine, or other plant, or any part thereof.

Mr. STUART. But I evidently don't understand your point. My point is that that does not increase the ability of the plant by taking it over to take care of the load.

Mr. ESCH. Have you exercised any power under this provision? Have you taken over any mine, any pipe line?

Mr. STUART. You may say that we have exercised power in the case of the Central Illinois Public Service Co. You understand we haven't done it in the sense of commandeering. It has been a mutually agreeable understanding between the Fuel Administration and the power company, with the object of satisfying the mines and of being certain from our standpoint that this power is being distributed to the best advantage. But, as I say, even after that we haven't got the surplus to take care of the situation. The bare fact of our taking it over doesn't do more than help; that is all. Those people need money. They need equipment, and the question is how are they going to get it?

Mr. ESCH. Well, your point is that the law under which you are operating does not give you power to enlarge an existing plant for power-development purposes?

Mr. STUART. It does not.

Mr. ESCH. Yes; this bill, the food-supply bill.

Mr. STUART. No; it does not. In other words, Secretary Baker thoroughly appreciates the seriousness of this condition, but there is nothing that he can do by commandeering, for instance, that would help. After he commandeers he has still got to have the money to increase facilities with, and there is no appropriation covering that.

Mr. ESCH. Well, this same act gives you the power, or the President, if he thinks things are not running right—he is authorized and empowered in every such case to requisition and take over the plant. Now, referring to coal and coke—

take over the plant, business, and all appurtenances thereof belonging to such producer or dealer as a going concern and to operate or cause the same to be operated in such manner and from such agency as he may direct during the period of the war or for such part of such time as in his judgment may be necessary.

There is power given to operate the same as he sees fit. The power of operation would involve the power of increasing the supply of power.

The CHAIRMAN. Mr. Esch, do you mean that under that law the President would have the right to go ahead and build additional power plants, central plants and central stations, and what seems to be absolutely needed?

Mr. ESCH. To operate or "cause same to be operated in such manner as he sees fit."

The CHAIRMAN. But don't that apply to existing conditions? Operating is one thing and building something to operate is entirely a

different thing, and there is no appropriation that will authorize the construction of it.

Mr. STUART. For instance, Admiral Harris has just taken over the Norfolk central station system, because Admiral Harris felt he could operate that to better advantage. He did it, of course, under this law that you mention, but Admiral Harris has no money with which to put in additional equipment.

Mr. ESCH. What I am driving at is what is going to become of the \$150,000,000 that was appropriated by this act, as shown in section 19—

that for the purpose of this act the sum of \$150,000,000 is hereby appropriated out of any moneys in the Treasury not otherwise appropriated, to be available during the time this act is in effect.

Now, you claim that there is nothing in that tremendous appropriation that will permit the Fuel Administrator to relieve the power situation? Is that your interpretation of it?

Mr. STUART. If there is, the counsel of the War Industries Board and of the Fuel Administration do not realize it, because if that money were available for such means we would not be up against the situation we are up against now with reference to the power shortage that exists over the country. I don't know what were the intentions of the railways, but—

Mr. ESCH (interposing). Well, it did not come from this committee. I will say that.

Mr. STUART. But that interpretation has never been placed on it.

The CHAIRMAN. Well, I don't see how it could be placed on it.

Mr. SNOOK. Mr. Esch, what law are you reading?

Mr. ESCH. The food bill.

The CHAIRMAN. The Food Administration law. If Dr. Garfield were to go out and build 10 or 15 new projects from bottom to top to supply power, I don't think anybody would kick sooner than Congress about it. He would be using money which had not been so authorized.

Mr. STUART. If it had been possible to stretch any point to use it in that way, it would certainly have been used.

The CHAIRMAN. For three months we have been trying to see whether we could use existing appropriations for this purpose, and we were not able to do so, according to the advice of lawyers that have been consulted, both of power companies and the Federal Government—the Department of Justice. Of course that \$150,000,000, as I understand, was for the entire use of the bill, for all provisions of the law, the executing of it, not simply to relieve the power situation, which only comes indirectly under the Fuel Administration by reason of the production of coal, or loss in production of coal due to power shortage.

Mr. STUART. Some of the ablest minds, engineering and legal and business in the country, located here in Washington, have tried to find a way out from that angle or from any other angle that they could see.

The CHAIRMAN. Without additional expense.

Mr. STUART. And they have been absolutely unable to do anything, and we can be certain that if there was a way out of it like that, somebody would have found it before, because the appreciation of the seriousness of this situation in its direct relationship to meet-

ing the requirements on the other side of the water has been known for a good many months.

The CHAIRMAN. Mr. Esch, have you anything further?

Mr. ESCH. I don't claim that I have found any remedy or relief. I just read these provisions in order to show the scope of the power you already have and the appropriations that are available. Now, it may be that in the strict interpretation of this act it doesn't give you the power to add to an existing plant for power purposes.

The CHAIRMAN. Well, of course, Mr. Stuart is an engineer, and I suppose he can not give us information concerning that matter.

Mr. ESCH. No. I will not prosecute the examination any further on that.

Mr. PARKER of New Jersey. There is a great deal of waste product from the beehive cook oven, isn't there?

Mr. STUART. Yes, sir.

Mr. PARKER of New Jersey. Of course it couldn't be changed into specific coal products such as toluol, etc., without changing the whole oven, but would it be possible to capture the gas that rises from those ovens in a sort of a smokestack and burn it so as to make a big power plant?

Mr. STUART. It is possible, but hardly practicable. It has been tried by the H. C. Frick Co., of the United States Steel Corporation, and others. It has been tried in Germany, and whereas it can be done, still your ovens have got to be located very close to your plant, say, within a few hundred feet of your plant, and as you know, those ovens are scattered all over the coal fields.

Mr. PARKER of New Jersey. You can not carry the gas through pipes for any distance?

Mr. STUART. Not for any distance; no, sir.

Mr. PARKER of New Jersey. And that enormous waste of fuel that is taking place there is not available for making a power plant?

Mr. STUART. Not available in a practical manner.

Mr. PARKER of New Jersey. And you would have to have separate power plants instead of using it in this way?

Mr. STUART. Yes, sir.

Mr. PARKER of New Jersey. Are piles of culm—culm is small coal, isn't it?

Mr. STUART. Yes, sir; nearly dust.

Mr. PARKER of New Jersey. Are they available without treatment for boiler purposes?

Mr. STUART. That was a question that was asked Dr. Garfield yesterday. The Hauto plant of the Lehigh Coal & Navigation Co. is using culm to make its power almost entirely. They have built their boilers and their ovens for that purpose. They are using material which can't be used in other markets to any advantage with the present equipment that is available to burn it. Now, if we could enlarge, we will say, the Hauto plant, we would continue to use that culm. There is a great quantity of it unused and within a short radius of this plant, say 7 or 8 or 9 or 10 miles. There is an enormous quantity in the immediate vicinity of this plant. There are 500,000 or 600,000 tons of it produced every year near there. To-day that stuff goes into the culm banks. If we were to use that we could enable just that much more coal—that is, larger sizes of anthracite coal, which is so badly needed—to go into the market.

Mr. PARKER of New Jersey. What I asked you was whether the culm in the banks, with proper methods of burning, could be burned itself, or whether you had to treat it first—sift it, etc.?

Mr. STUART. No; it can be, with proper methods of burning, burned just as it stands, and it is being burned as it stands.

Mr. PARKER of New Jersey. I suppose those proper methods consist in the arrangement that I have seen for mechanical feeding of the furnaces over slides or sieves, or whatever it may be?

Mr. STUART. Yes, sir.

Mr. PARKER of New Jersey. Small grates; and then it is fed in continuously so that it does not get banked up or choke the fires. I have seen it used with very small coal.

Mr. STUART. And the grate surface is large.

Mr. PARKER of New Jersey. And does it make a very great additional expense to put up boilers and furnaces of that sort, or is it about the same as the ordinary appliances?

Mr. STUART. Well, there is an additional expense connected with it, but, at the same time, where that culm is available there is other compensation which offsets that additional expense.

Mr. PARKER of New Jersey. Are those culm banks in the center of large manufacturing districts, or within a reasonable distance?

Mr. STUART. They are.

Mr. PARKER of New Jersey. And that will enable an enormous saving of coal, therefore, and coal transportation?

Mr. STUART. It would, and just such a saving as is contemplated with the money made available by this bill for the purpose of enlarging facilities. Those matters are fully in mind.

Mr. PARKER of New Jersey. Would your carrying to eight or nine mills have to be by rail, or by cable buckets, or by some other system?

Mr. STUART. It would be by rail. But, then, that distance is very short, merely what you would call a switching haul.

Mr. PARKER of New Jersey. But it means loading and unloading, and there is always some trouble under very proper facilities.

Mr. STUART. Yes, sir.

Mr. PARKER of New Jersey. But I suppose you just scoop it from the culm banks into the car and drop it from the car into the elevator receptacle, which would feed the boilers?

Mr. STUART. Yes, sir.

Mr. PARKER of New Jersey. So there would be no great amount of power wasted?

Mr. STUART. No great amount of power and a very small amount of labor.

Mr. PARKER of New Jersey. Is that available at any other place than the one you have mentioned?

Mr. STUART. It is available at different points through the anthracite fields, but there is a sufficient quantity of it available in close proximity of the Hauto plant, for instance, to take care of the contemplated increase in capacity.

Mr. PARKER of New Jersey. How much increase of horsepower would you expect to get there, and at what cost?

Mr. STUART. In the neighborhood of 100,000 kilowatts.

Mr. PARKER of New Jersey. One-third more of horsepower?

Mr. STUART. Yes, sir.

Mr. PARKER of New Jersey. And the cost?

Mr. STUART. My recollection is that the estimate at that plant is about \$15,000,000.

Mr. PARKER of New Jersey. And 100,000 kilowatts. That is about \$150 per kilowatt.

Mr. STUART. Per kilowatt; yes, sir.

Mr. PARKER of New Jersey. And what proportion of increase would that give to the horsepower of that locality? What horsepower is there now, or what kilowatt power?

Mr. STUART. At the present time the Hauto plant is making—

Mr. PARKER of New Jersey (interposing). I mean the whole horsepower of the locality. I don't mean that particular plant.

Mr. STUART. Well, that whole eastern Pennsylvania section—you see such a plant would tap in on the power lines of that eastern Pennsylvania and New Jersey district.

Mr. PARKER of New Jersey. Would it add 20 per cent, 10 per cent, or what per cent of the total power of that section?

Mr. STUART. Probably a third.

Mr. PARKER of New Jersey. That is what I want to get.

The CHAIRMAN. That is all in detail in the record, Judge.

Mr. STUART. I should like to say, sir, in making these observations, that I am speaking from memory and not with exact knowledge—I am not up on this particular point.

Mr. PARKER of New Jersey. That is all I have.

Mr. SNOOK. This bill also carries the power to build and equip new plants, and from your statement, as I understand it, so far as the coal situation is concerned, the need can be supplied by giving aid to plants that are already in existence?

Mr. STUART. Yes, sir.

Mr. SNOOK. Would it require the building of any new power plants?

Mr. STUART. In no single case where the coal fields are concerned would it be necessary or advisable to build a new plant. In all cases it would be an enlargement of existing plants—at least, that would be the practical way to go about it, and the quick way to get results.

Mr. SNOOK. To give aid to the plants already in existence?

Mr. STUART. Yes, sir.

Mr. SNOOK. Now, one more question. It is along the line that Mr. Esch was inquiring about. While you are an engineer, you may have some information on the subject. I have been informed—I don't know that it is so—that aid had been given in a great many instances to plants engaged in the manufacture of essential war materials, like shells and guns and things of that kind—money to help them equip the plant. Now, where does that power come from?

Mr. STUART. Well, I don't know, but I presume it simply comes from the general power to appropriate money for the shells and so on. You have got to have the plant.

Mr. SNOOK. I mean to give aid to do just what you are trying to do in these plants—that is, buy new equipment and build new plants.

Mr. STUART. I can't tell you, sir, where that power comes from, but I know that the same power can not be exercised with respect to these plants.

Mr. SNOOK. You have gone into detail and found that you don't have the power any place to spend any money for this purpose?

Mr. STUART. Yes, sir; that seems to be the opinion of the Secretary of the Navy and other Government officials.

Mr. SNOOK. At least, you think it is necessary to have this power for that purpose?

Mr. STUART. Yes, sir. At least, it is inconceivable that if they did have that power they would not have exercised it, because they certainly realized what this situation is.

Mr. SANDERS. I want to ask Mr. Stuart just one question that I am somewhat interested in.

One of the ways of saving consumption of coal, as I understand it, is to utilize some other product; for instance, natural gas, wherever possible. Now, the situation down in my country is this: We have no coal fields at all in Louisiana. New Orleans and the surrounding country use a vast amount of coal. Within a short distance, say 50 miles, of New Orleans we have to-day the biggest gas wells in the world, which are tapped. Wouldn't it be within the province of the Fuel Administrator to undertake to get that natural gas to New Orleans and the surrounding industries and thereby save the importation of this coal down there?

Mr. STUART. I can not say whether it would be within the province, because I don't know what the later aspects of this would be, but I can say this, that if that natural gas could be brought down to Louisiana there would be a big coal saving. I have heard of those gas fields, of course, and there is no question but that that natural gas brought by pipe line to New Orleans and supplied, we will say, to other settlements on the line would work a valuable conservation, because there is a long haul down into Louisiana.

Mr. SANDERS. Well, here is the situation exactly, Mr. Stuart: We have these tremendous gas wells within 50 miles of this industrial center. There isn't a single engineering difficulty known. The only reason we can't get gas into New Orleans is that we can't get the pipe. Now, I am asking for information because our people are very much interested in the proposition. Isn't it, and ought not the Fuel Administrator, in order to save coal—ought not the Fuel Administrator to take that up and get that pipe down there?

Mr. STUART. The Fuel Administrator. I am sure, would be glad to go into that situation and do anything within his power.

Mr. SANDERS. We have done our best to get some action on it. Now, let me explain the situation to you, because you are the first one I have been able to get hold of. The mains for the gas are already laid, as you well know, all over our country—I mean our city. Now, the artificial gas that we use in New Orleans is made from coal, isn't it?

Mr. STUART. Yes, sir.

Mr. SANDERS. All of our industries down there are run by coal and the fuel that is used in the city is coal, for household purposes, either coal in its natural form or in the form of gas. Now, with a 50-mile pipe line into New Orleans there wouldn't be any necessity for a carload of coal to leave the North to come down to us. Now, isn't a thing like that well worth looking into?

Mr. STUART. Certainly, it is. The conservation aspect of that would, of course, be weighed against the requirement of pipe and labor to put that line in. Steel pipe or iron pipe is in very great

demand. There is very little of it available away from direct war requirements. Now, just what the balance would be I can't state.

Mr. SANDERS. Well, to place a community of half a million people where they wouldn't have to use a pound of coal, wouldn't that be a great saving?

Mr. STUART. Certainly, it would.

Mr. SANDERS. Considering the fact that you only have to put in a 50-mile pipe line.

Mr. STUART. There is absolutely no question on that point.

Mr. SANDERS. If you gentlemen would take that up and give us a priority order for 50 miles of pipe line, we would have gas there in time so that we would not burn a pound of coal this winter. We have been trying to get it for months.

Mr. STEPHENS. Everything is already for it?

Mr. SANDERS. Everything is all ready. The wells are 50 miles away from New Orleans, the greatest gas wells in the world. The last one brought in there was said to be the greatest on earth, and at the other end of the 50-mile stretch is a complete system of mains to supply all the households and utilities and everything else in the city, and there is a gap of 50 miles waiting because we can't get pipe.

Mr. PARKER of New Jersey. Do I understand that you have the money available and it is simply a question of priority of pipe?

Mr. SANDERS. That is my understanding. I, of course, don't know anything about it except what I am told, but my understanding is that the only thing that prevents gas being brought into New Orleans is the fact that we can't get pipe; that the money and everything else is available.

Mr. STUART. Could you have this matter formally brought before the Fuel Administration, or has it already been brought before the Fuel Administration?

Mr. SANDERS. It was brought before them months ago.

Mr. STUART. What has been the reply?

Mr. SANDERS. Nothing.

Mr. STUART. That gas situation is not in my province.

Mr. SANDERS. We may be entirely mistaken about it, but we think that the proposition to save coal for half a million people, a great industrial center, and at the same time relieving hundreds and hundreds of cars and locomotives that are now hauling coal down there, to be used for some other purpose, would be well worth the attention of you gentlemen in the Fuel Administration.

Mr. STUART. I should be glad to bring that to the personal attention of Dr. Garfield.

Mr. SANDERS. I will be glad to take it up with you and Dr. Garfield in person.

Mr. PARKER of New Jersey. Might I interject a question on that subject? It interests me. I would like to ask, first, whether large concrete or ordinary sewer pipes properly joined would carry gas at low pressure, or would the pressure be too much?

Mr. SANDERS. I will answer that question myself and state that we have investigated and found out that we can make the concrete pipe, but we can't get the cement.

Mr. PARKER of New Jersey. But the cement would work?

Mr. SANDERS. The cement pipe would work; yes.

Mr. PARKER of New Jersey. Now might I ask another question?

Mr. SANDERS. Wait a minute, Judge Parker. I say it would work. It never has worked, but people think it would work theoretically, but they couldn't get the cement, so there was no use in trying it.

Mr. PARKER of New Jersey. It would have to be glazed inside, but that is easily done. Might I ask another question? How would the cost of pipe for 50 miles compare with the cost of putting up a central power plant operated by this gas, where the gas comes from the wells, and sending the power 50 miles to New Orleans to take care of their factories and all that?

Mr. STUART. I can't answer that question, sir.

Mr. PARKER of New Jersey. You think that is too big an engineering question?

Mr. STUART. It is a question I could not answer without investigation.

Mr. SANDERS. The bringing of the gas to New Orleans, Mr. Parker, would cost infinitely less.

Mr. STUART. That would be my offhand judgment.

Mr. PARKER of New Jersey. That is what I wanted to get.

Mr. SANDERS. I don't think this is an extraneous matter, Mr. Chairman, because if we could get this gas into that manufacturing center—and remember that New Orleans is the greatest manufacturing city in the South, and all of our people use gas for fuel, and gas is made from coal—if this natural gas, an inexhaustible supply, could be brought into New Orleans at once it would save an enormous amount of coal.

The CHAIRMAN. I was going to suggest, if this bill passes, it might relieve that situation.

Mr. SANDERS. Now, that is what I want to know. If this bill passes, would you be in a position to bring that gas into New Orleans? I want to know that. Would the bill cover that?

Mr. STUART. I can't answer that question.

Mr. SANDERS. Will you have it answered by your legal department?

Mr. STUART. I will be glad to present it to them.

Mr. SANDERS. And furnish us an opinion on it?

Mr. STUART. I will be glad to.

Mr. SANDERS. The proposition is this: Under the provisions of this bill, if it passes and becomes a law, would the Fuel Administrator be authorized to pipe this natural gas into New Orleans in order to relieve the fuel shortage?

Mr. STUART. I will be glad to take that up and have a reply made.

Mr. SANDERS. One other question—and I am not asking it in a carping spirit, but I just want to ask it for my own information.

If this proposition that we are up against, the shortage of power, was known, as you stated, about a year ago—that we were going to be up against it—I want to ask from the legislative branch of the Government why was this bill only introduced last month?

The CHAIRMAN. I can tell you that a great deal better than the witness can, I expect. You can make your answer, Mr. Stuart.

Mr. STUART. My reply would be that this war finance measure—you know the War Finance Corporation—the measure under which they are working, was under consideration for a long time, and as you know, when it finally came through, as most of these power people say, they can borrow money more easily and more readily from their banks than they could borrow it through that institution. They can't borrow it through the banks, so they are up against it.



Mr. SANDERS. Then the reason for the delay in the introduction of this measure was because under the war finance bill it was thought that the power plants could finance themselves?

Mr. STUART. That is the only conceivable delay that I can understand. To bear on that point, the question was raised yesterday about putting certain mines, we will say, on night shift and taking advantage of the low load curve which always exists at night. I raised the question a short time ago with Mr. Murray, president of the Federation of Labor at Pittsburgh, as to the attitude of labor as regards putting the mines, or a certain part of the mine load, on night shift, and his reply was, "Why do you ask the miners to do this? Isn't it shortsightedness? A Government official was in my office here a year ago and pointed out this power shortage that was going to exist at the mines and at that time asked as to whether those mines could be put on night shift." Well, my point is simply that we have known this for a long time.

Mr. SANDERS. One other question. What are the hours of work of the miners?

Mr. STUART. The hours of work of miners are 8 to 5 o'clock.

Mr. SANDERS. Nine hours.

Mr. STUART. That is in the Pennsylvania field.

Mr. SANDERS. Eight hours' work.

Mr. STUART. An 8-hour day. In some of the fields they have a 10-hour day, but under the agreements up there in those Pennsylvania and Ohio and Illinois fields they have an 8-hour working-day, and the President is a party to the agreement with the mine workers whereby the scale of wages was specified for the period of the war, and whereby also the hours of work were specified.

Mr. SANDERS. One other question. Does that mean that the mines are worked 8 hours and are idle 16 hours?

Mr. STUART. Yes, sir.

Mr. SANDERS. Now, there are a great many industries in my State that work only 8-hour shifts, but work 24 hours a day on an 8-hour shift, and they have what is called a broken shift, by which no man works the same hours each week, so that a man would work sometimes on one 8-hour shift and sometimes on the second, sometimes on the third, so he has always got day and night work. Is that impracticable to put into operation in the mines?

Mr. STUART. No, sir. There are just two alternatives. When you work your mine you have got to have your full force. Now you could work a certain group of mines on a day shift and another group of mines on a night shift, provided the miners would work on the night shift, but we have recently had the experience, for instance, out in West Virginia, as the result of insufficient generating capacity, where we endeavored to reduce the peak—that is to say, the demand—to a point within the generating capacity that was available by placing one group of mines on a shift running from 6 in the morning until 2 o'clock, another group from noon until 8 o'clock, so that we would actually cut the demand, theoretically, very nearly in two. The result was that the miners came out at 9 in the morning, or 8 in the morning, as usual, and went out at 12. In the other case they went to work, we will say, at noon, and stopped work at their usual stopping time, which was about 5. You probably know that the miner is the most uncontrollable class of labor that there is. We have got a

great many aliens among our mining population. They have been accustomed always to work on a day shift. Mr. Murray, president of the American Federation up there, said that he would be glad to get out and try to persuade the miners that they should help to that extent, but he was very, very fearful of what he could do, even though he had the Labor Board at Washington back of him. Now that doesn't mean that we have given up that idea, but, even supposing that we were to get the miners to work at night, it would be simply a drop in the bucket so far as the general power situation is concerned.

Mr. SANDERS. The reason I asked was merely for information, because I have no mines in my State, and our laboring people, large classes of them in industries, run 24 hours a day.

Mr. STUART. The steel industries run three shifts a day, you know, and a great many of the industries in those centers run a three-shift day.

Mr. PARKER of New Jersey. And every blast furnace has to, doesn't it?

Mr. STUART. The blast furnace has to run a three-shift day.

Mr. SANDERS. I thought there was no physical objection to it, because when the coal reaches the surface all the work is done by other people then, isn't it?

Mr. STUART. Yes; but the matter of loading and the preparing of the coal is done on the outside.

Mr. SANDERS. That is after the coal is up and out of the mine.

Mr. STUART. But then it has to be brought out as it is mined. There is no storage capacity on the inside of the mine.

Mr. SANDERS. That is all I have. You are going to look into that gas situation in New Orleans, are you, and let me know about it?

Mr. STUART. Yes, sir.

Mr. WINSLOW. I would like to ask the gentleman if he has anything to say about the situation in New England—the general situation regarding power?

Mr. STUART. Nothing, sir, except that the situation, from what I know of it—it doesn't come directly within my field of work—but the situation there is becoming serious, as it is in every other section where there is war industry.

Mr. WINSLOW. Do you think the increase of power would help any in removing the reasons for strikes in coal mines?

Mr. STUART. The reasons for strikes in coal mines? We have had complaints from different mining fields, from the miners themselves, "What is the use? We can't work; we can't get the power. We go out into the mine and the mine shuts down because there is no power. It is merely one of those general irritating points, that is all. I wouldn't say that the question of content or discontent which would lead to strikes would have to any great extent the power question as its foundation. It might be a contributing cause—in fact it already has been in so far as complaint is concerned.

Mr. WINSLOW. I don't know that the question is entirely proper, and I make my statement to that effect before asking it, but I am going to take a chance and ask you if you know—and if you do know, whether you feel justified in telling the committee—why this gasoline order, or request, in respect to running pleasure automobiles

on Sunday was confined to the territory east of the Mississippi River?

Mr. STUART. I can not, sir. I really haven't the information upon which to base any reply at all.

Mr. WINSLOW. Well, I don't know that that is proper anyway.

Mr. STUART. I have suffered myself with the others on Sunday, but have accepted the situation.

Mr. SANDERS. I want to make one statement before we close, Mr. Chairman. What I have stated in regard to the pipe-line situation in New Orleans, aside from the physical aspect, the distances, etc., taking it up with you gentlemen, has come to me from hearsay. I haven't taken it up myself and I don't know whether it has been taken up except, as I say, through hearsay. But I would be very much obliged to you if you would take it up yourself and give me an opportunity to take it up with Mr. Garfield, and in addition to that get an opinion from an attorney of your board as to whether or not this bill would cover the situation, and, if not, ask him to draw an amendment that would help it.

Mr. STUART. Very well, sir.

Mr. Chairman, may I make just one remark before I close?

The CHAIRMAN. Certainly; make any statement on this matter that you think proper.

Mr. STUART. I assume that the various people who have testified here have made clear to you how immensely serious this power situation is. It is absolutely inconceivable that something has not been done about it before; that some means have not been extended in order that power necessary for war industry could be developed. We have the precedent in the case of England, as I stated a little while ago. We can't make shells unless we have power to make them with. The curtailment of power or the lack of power in the central districts has a direct effect on the production of shells, of guns, and of all other material necessary on the other side. We have millions and hundreds of millions for the ammunition that we need, yet the power that goes into the making of those shells is just as essential as the steel that goes into the making of them. We don't ask what becomes of these shells when they go to the other side, yet we are raising an awful row about any money that is extended to these power plants to produce the power that is making the shells, in spite of the fact that any money we do put into these power plants is not wasted money; it is a good investment and should be regarded as such. In other words, when these two or three or four hundred millions, or one or two billion dollars worth of shells and guns go over to France we know that it is going into thin air. The \$200,000,000 which Congress has asked to produce that vitally needed material becomes a permanent investment, and one is just as necessary as the material itself. It is simply incomprehensible how any question can be raised over the necessity of a measure of this character—at least it is incomprehensible to the engineers who know the seriousness of the situation. It should have been taken care of a long time ago.

The CHAIRMAN. There is no one else here to be heard this morning, I believe, and we are very much obliged to you.

(Whereupon, at 11.50 o'clock a. m., the committee went into executive session.)







